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File 348:European Patents 1978-2000/Nov W03

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Set	Items	Description
S1	25769	LIQUID() CRYSTAL() DISPLAY? OR LCD
S2	621	LIGHT() SHIELD?() (MEMBER? OR LAYER? OR SUBSTANCE? OR TAPE?)
S3	16576	LIGHT?(3N) (COVER? OR HIDE OR SHIELD? OR HIDING OR BLOCK? OR MASK?)
S4	1263	PREVENT?(3N) (IRRADIAT? OR ILLUMINAT?)
S5	376	(S3 OR S4) (3N) (COMPLETELY OR TOTALLY OR FULLY)
S6	11355	TRANSPAREN?(3N) (GLASS OR RESIN)
S7	3116	SEMICONDUCTOR?() ELEMENT?
S8	855467	ARRANG? OR PLACED OR DEPOSIT? OR PLACING OR FORMED
S9	467	OPPOSITE() SURFACE(3N) SUBSTRATE?
S10	31	SIMPLE(3N) MATRIX() METHOD?
S11	19	FACE() DOWN() METHOD?
S12	1613	(LARGER OR BIGGER OR EXTEND?) (3N) POLARI?() PLATE? OR MOLDING() RESIN?
S13	681	ARBITRARY(3N) PATTERN?
S14	103	S1(S) (S2 OR S5)
S15	0	S14(S) S11
S16	0	S14(S) S7(S) S8(S) S9
S17	2	S14(S) S7
S18	0	S14(S) S9
S19	0	S14(S) S11
S20	1	S14(S) S12
S21	1	S14(S) S13
S22	0	S21 NOT S20
S23	5	S14(S) S6
S24	10055	IC=G02F-001
S25	4154	S1 AND S24
S26	3	S25(S) S13
S27	193	S24 AND (S2 OR S5)
S28	1	S27(S) S7(S) S8(S) S9

17/3,K/1 (Item 1 from file: 349)  
DIALOG(R) File 349:PCT Fulltext  
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00562764 \*\*Image available\*\*

**LIQUID CRYSTAL DISPLAY AND ELECTRONICS EQUIPMENT USING THE SAME  
AFFICHAGE A CRISTAUX LIQUIDES ET MATERIEL ELECTRONIQUE L'UTILISANT**

Patent Applicant/Assignee:

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Inventor(s):

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9805999 A1 19980212

Application: WO 97JP2543 19970723 (PCT/WO JP9702543)

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PT SE

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English Abstract

A liquid crystal display having a pair of substrates (1, 2) disposed in an opposed state, and a semiconductor element (12) bonded directly to a surface of the substrate (1), the portion of the surface of the semiconductor element (12) which is other than an active surface (12a) being covered with a light shielding member (16). Since the light shielding member (16) completely shuts off the light radiating from the upper surface and side surfaces of the semiconductor element (12) and bonded surface between the semiconductor element (12) and substrate (1), an erroneous operation of the semiconductor element (12) can be prevented.

17/3,K/2 (Item 1 from file: 348)  
DIALOG(R) File 348:European Patents  
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00930852

**LIQUID CRYSTAL DISPLAY AND ELECTRONICS EQUIPMENT USING THE SAME  
FLUSSIGKRISTALLANZEIGE UND ELEKTRONISCHE BAUGRUPPE MIT DEREN VERWENDUNG  
AFFICHAGE A CRISTAUX LIQUIDES ET MATERIEL ELECTRONIQUE L'UTILISANT**

PATENT ASSIGNEE:

SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome,  
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PATENT (CC, No, Kind, Date): EP 871060 A1 981014 (Basic)

WO 9805999 980212

APPLICATION (CC, No, Date): EP 97932988 970723; WO 97JP2543 970723

PRIORITY (CC, No, Date): JP 96207402 960806

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INTERNATIONAL PATENT CLASS: G02F-001/1345; G02F-001/1335;

ABSTRACT WORD COUNT: 98

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9842	530
SPEC A	(English)	9842	4380

Total word count - document A 4910  
Total word count - document B 0  
Total word count - documents A + B 4910

...ABSTRACT A1

A liquid-crystal display device has a pair of substrates (1, 2) which are opposite to each other and a semiconductor element which is directly joined to the substrate (1). A portion other than an active surface (12a) of the surfaces of the semiconductor element (12) is covered with a light-shielding member portion (16). Since the light-shielding member (16) completely shields light irradiated from the upper and side surfaces of the semiconductor element (12) and a joint surface between the semiconductor element (12) and the substrate (1), the semiconductor element (12) can be prevented from being erroneously operated.

...SPECIFICATION device on which the liquid-crystal display device is mounted.

(BACKGROUND ART)

In recent years, liquid-crystal display devices are popularly used in various devices such as a navigation system, a television set...

...and a portable telephone to display visible information. As a packaging method of packaging a semiconductor element, e.g., a driver IC, on a liquid-crystal panel in manufacturing a liquid-crystal display device, a packaging method of directly joining a semiconductor element to one of a pair of substrates which are opposite to each other through a...

...is known. When the COG method is used, reduction in thickness and weight of a liquid-crystal display device, a very fine (micropattern) connection pitch, and the like are expected. However, when the COG method is used, a semiconductor element is directly joined to a transparent substrate by a joining agent such as an ACF...

...this reason, light from a back light or sunlight may be directly irradiated on the semiconductor element through the substrate. The irradiated light may cause the semiconductor element to erroneously operate. The following problem is also posed. That is, light irradiated from a portion other than the active surface of a semiconductor element passes through the semiconductor element to adversely affect the active surface. As a result, the semiconductor element is erroneously operated. In order to prevent light from being irradiated on a semiconductor element packaged on a substrate by the COG method, the following conventional liquid-crystal display device is disclosed in Japanese Unexamined Patent Publication No. 1-128534. FIG. 8 is a view showing a typical example of a liquid-crystal display device of this type. In a metal film forming process step for forming an active...

...51 is also formed in a region corresponding to an IC chip, i.e., a semiconductor element, and the metal film 51 is used as a light-shielding layer for the IC chip 12.

However, in the conventional liquid-crystal display device, light irradiated...

...complex process.

In order to achieve the above object, according to the present invention, a liquid-crystal display device having a pair of substrates which are opposite to each other through a liquid crystal, and a semiconductor element which is directly joined to at least one of the substrates, is characterized in that a portion of the semiconductor element other than the surface joined to one of the substrates is covered with a light-shielding member.

In this liquid-crystal display device, a light-shielding

member is not formed between a semiconductor element and a substrate, and a portion, other than the surface joined to the substrate, of the surfaces of the semiconductor element joined to the substrate is covered with a second light-shielding member. More specifically, the semiconductor element itself is shielded from light by the light-shielding member. With this arrangement, the light-shielding member arranged to cover the semiconductor element completely shields light irradiated from the upper and side surfaces of the semiconductor element and the joint surface between the semiconductor element and the substrate, so that the semiconductor element can be completely prevented from being erroneously operated.

One pair of substrates which sandwich the...an IC chip, cost uneconomical increases.

Therefore, when the present invention is applied to a liquid-crystal display device of the simple matrix type, a remarkable effect can be obtained. In the liquid-crystal display device of a so-called active matrix type, a light-shielding layer, i.e., a light-shielding member, for shielding the semiconductor element from light in the processing step of forming an active element on a glass substrate...

...step of forming an active element is not performed in the simple matrix type, a light-shielding layer cannot be incidentally formed.

As a method of joining a semiconductor element to a substrate...

...semiconductor element can be shielded.

According to the present invention, various concrete examples of a light-shielding member can be considered. For example, since a polarizing plate is fixed to the surface of a substrate in a general liquid-crystal display device, the size of the polarizing plate is made large to extend the polarizing plate...

...the effective display region of a liquid-crystal panel, i.e., a portion where the semiconductor element is packaged, and the extended portion can be used as the light-shielding member. Also, a sheet member having light-shielding properties is arranged to cover the semiconductor element, so that the light-shielding member can be constituted. The light-shielding member can also be formed such that the surface of a semiconductor element joined to a substrate is covered with a molding resin. When the semiconductor element is covered with a molding resin, the semiconductor element can be shielded from light. In addition, the semiconductor element is mechanically protected by the molding resin, or the semiconductor element can also be prevented from being exposed to humidity.

As a concrete example of the...

...surface, which is opposite to the semiconductor element, of the substrate.

In addition, when one light-shielding tape having light-shielding properties and flexibility is adhered to the substrate such that the tape is bent around the substrate, the two functions of the light-shielding member and the second light-shielding member can be achieved by one light-shielding tape. In this case, when a tape material having flexibility and elasticity is used as a light-shielding tape, the light-shielding tape can be attached to be in tight contact with the semiconductor element or the substrate. For this reason, the outside size of the liquid-crystal display device is not vainly increased, and operability can be improved.

According to the present invention, an electronic device in which a liquid-crystal display device having a pair of substrates which are opposite to each other through a liquid crystal and a semiconductor element which is directly joined to at least one of the substrates and a main body having a main substrate for sending an external input signal to the semiconductor element are connected to each other by a connection circuit substrate is characterized in that a...

...a surface, which is joined to one of the substrates, of the surfaces of the **semiconductor element** is covered with a **light-shielding member**.

The electronic device is characterized in that a second light-shielding member for shielding light...the driver IC 12 and the joint portion between the first substrate 1 and the **semiconductor element** 12 is blocked by the extended portion 7a of the polarizing plate 7, and the active surface 12a is shielded from light. The **light-shielding member** 7a for shielding the driver IC 12 from light is constituted as follows. That is, the polarizing plate 7 quite generally used in the **liquid-crystal display** device is increased in area, and the extended portion 7a of the polarizing plate 7...

...IC 12. Therefore, a specially complex processing step need not be performed to arrange the **light-shielding member** 7a, and the **liquid-crystal display** device is extremely economical with respect to the number of parts or the number of...

CLAIMS 1. A **liquid-crystal display** device having a pair of substrates which are opposite to each other through a liquid crystal, and a **semiconductor element** which is directly joined to at least one of said substrates,

characterized in that a...

...a surface, which is joined to one of said substrates, of the surfaces of said **semiconductor element** is covered with a **light-shielding member** portion.

2. A **liquid-crystal display** device according to claim 1, characterized in that a second **light-shielding member** for shielding light being toward said **semiconductor element** is arranged on a surface, opposite to the surface, to which said **semiconductor element** is joined, of the surfaces of one of said substrates.
3. A liquid-crystal display...

...by a portion located outside an effective display region of said polarizing plate.

6. A **liquid-crystal display** device according to any one of claims 1 to 4, characterized in that said **light-shielding member** is a molding resin which covers the surface of said **semiconductor element** joined to said substrate.
7. A liquid-crystal display device according to any one of...

...to a surface of one of said substrates.

10. An electronic device in which a **liquid-crystal display** device having a pair of substrates which are opposite to each other through a liquid crystal and a **semiconductor element** which is directly joined to at least one of said substrates and a main body having a main substrate for sending an external input signal to said **semiconductor element** are connected to each other by a connection circuit substrate,

characterized in that a portion...

...a surface, which is joined to one of said substrates, of the surfaces of said **semiconductor element** is covered with a **light-shielding member**.

11. An electronic device according to claim 10,

characterized in that a second light-shielding...

20/3,K/1 (Item 1 from file: 348)  
DIALOG(R) File 348:European Patents  
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00930852

**LIQUID CRYSTAL DISPLAY AND ELECTRONICS EQUIPMENT USING THE SAME**  
**FLUSSIGKRISTALLANZEIGE UND ELEKTRONISCHE BAUGRUPPE MIT DEREN VERWENDUNG**  
**AFFICHAGE A CRISTAUX LIQUIDES ET MATERIEL ELECTRONIQUE L'UTILISANT**

PATENT ASSIGNEE:

SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome,  
Shinjuku-ku, Tokyo 163, (JP), (applicant designated states: DE;GB)

INVENTOR:

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LEGAL REPRESENTATIVE:

Hoffmann, Eckart, Dipl.-Ing. (5571), Patentanwalt, Bahnhofstrasse 103,  
82166 Grafelfing, (DE)

PATENT (CC, No, Kind, Date): EP 871060 A1 981014 (Basic)  
WO 9805999 980212

APPLICATION (CC, No, Date): EP 97932988 970723; WO 97JP2543 970723

PRIORITY (CC, No, Date): JP 96207402 960806

DESIGNATED STATES: DE; GB

INTERNATIONAL PATENT CLASS: G02F-001/1345; G02F-001/1335;

ABSTRACT WORD COUNT: 98

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9842	530
SPEC A	(English)	9842	4380
Total word count - document A			4910
Total word count - document B			0
Total word count - documents A + B			4910

...SPECIFICATION semiconductor element can be shielded.

According to the present invention, various concrete examples of a **light-shielding member** can be considered. For example, since a polarizing plate is fixed to the surface of a substrate in a general **liquid-crystal display** device, the size of the polarizing plate is made large to extend the polarizing plate...

...where the semiconductor element is packaged, and the extended portion can be used as the **light-shielding member**. Also, a sheet member having light-shielding properties is arranged to cover the semiconductor element, so that the **light-shielding member** can be constituted. The **light-shielding member** can also be formed such that the surface of a semiconductor element joined to a substrate is covered with a **molding resin**. When the semiconductor element is covered with a **molding resin**, the semiconductor element can be shielded from light. In addition, the semiconductor element is mechanically protected by the **molding resin**, or the semiconductor element can also be prevented from being exposed to humidity.

As a...

...CLAIMS by a portion located outside an effective display region of said polarizing plate.

6. A **liquid-crystal display** device according to any one of claims 1 to 4, characterized in that said **light-shielding member** is a **molding resin** which covers the surface of said semiconductor element joined to said substrate.

7. A liquid...

23/3,K/1 (Item 1 from file: 349)  
DIALOG(R)File 349:PCT Fulltext  
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00431511

**LIQUID CRYSTAL DISPLAY ELEMENT**  
**ELEMENT D'AFFICHAGE A CRISTAUX LIQUIDES**

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Inventor(s):

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9625687 A1 19960822  
Application: WO 96JP347 19960216 (PCT/WO JP9600347)  
Priority Application: JP 9528535 19950217

Designated States: JP US AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

Publication Language: Japanese

Fulltext Word Count: 0

English Abstract

A liquid crystal display element having at least two transparent glass substrates each having in turn a transparent electrode that are disposed such that the transparent...

...circuit for driving the liquid crystal being disposed on the substrates outside the seals, the liquid crystal display element being characterized in that a first light shielding member having a light absorbing member for absorbing light is provided below the driving circuit via the transparent glass substrate.

23/3,K/2 (Item 1 from file: 348)  
DIALOG(R)File 348:European Patents  
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01056275

**Manufacturing method of colour liquid crystal display**  
**Herstellungsverfahren einer Flüssigkristall-Farbanzeigevorrichtung**  
**Procede de fabrication d'un affichage a cristal liquide en couleurs**  
**PATENT ASSIGNEE:**

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SHINTO PAINT COMPANY, LIMITED, (664851), 10-73, Minamitsukaguchi-cho 6-chome, Amagasaki-shi Hyogo 661, (JP), (Applicant designated States: all)

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PATENT (CC, No, Kind, Date): EP 932071 A2 990728 (Basic)  
EP 932071 A3 991229

APPLICATION (CC, No, Date): EP 99201345 951222;  
PRIORITY (CC, No, Date): JP 94320989 941222  
DESIGNATED STATES: DE; FR; GB; NL  
RELATED PARENT NUMBER(S) - PN (AN):  
EP 718664 (EP 95309428)  
INTERNATIONAL PATENT CLASS: G02F-001/1335  
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CLAIMS A	(English)	9930	458
SPEC A	(English)	9930	2800
Total word count - document A			3258
Total word count - document B			0
Total word count - documents A + B			3258

...SPECIFICATION quality.

Figs. 2a and 2b are sectional and frontal views of a prior art colour liquid crystal display. In the figures, the reference numerals denote a glass substrate 11, transparent electrodes 12 composed of ITO or the like and patterned into stripes, colour filters 13 created on the transparent electrodes 12 by way of electro-deposition, light shielding layers 14 formed only in the gaps between colour filters by applying a photosensitive substance containing a light shielding substance such as carbon on the colour filters 13 and by exposing and developing it from...

...15 on which transparent electrodes 16 and thin film transistors 17 are formed. The colour liquid crystal display is formed by pasting the colour filter substrate 11 and the thin film transistor substrate...to the present invention.

(First Embodiment)

Fig. 1 shows a section view of a multicolour liquid crystal display according to the present invention. In the figure, the reference numerals denotes a glass substrate 1, transparent electrodes 2 composed of ITO or the like and patterned into stripes, colour filters 3 deposition so that their shape coincides with a pixel, light shielding layers 4 formed by applying a photosensitive substance containing a light shielding substance such as carbon on the colour filters 3 and by exposing and developing it from...

23/3,K/3 (Item 2 from file: 348)  
DIALOG(R)File 348:European Patents  
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00965059

Liquid crystal display

Flussigkristallanzeige

Dispositif d'affichage a cristal liquide

PATENT ASSIGNEE:

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Moriguchi-shi, Osaka 570, (JP), (applicant designated states: DE;GB;NL)

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PATENT (CC, No, Kind, Date): EP 877283 A1 981111 (Basic)

APPLICATION (CC, No, Date): EP 97303169 970509;

PRIORITY (CC, No, Date): EP 97303169 970509

DESIGNATED STATES: DE; GB; NL



INTERNATIONAL PATENT CLASS: G02F-001/1333  
ABSTRACT WORD COUNT: 172

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FULLTEXT AVAILABILITY:

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SPEC A	(English)	9846	7050
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Total word count - document B			0
Total word count - documents A + B			7735

...SPECIFICATION a TFT substrate) having the above structure, a second substrate (an opposing substrate) made of **transparent** material, such as **glass**, is disposed opposing the first substrate, and a liquid crystal layer 40 is formed between...

...to upper left to impart uniform initial orientation to liquid crystal molecules. Also, for an **LCD** in the normally-white mode, orientation control window 32 is covered by a light-shielding...

...A layer 41 is also provided to cover gaps between pixel electrodes 22. Covering these **light-shielding layers** 41, inter-layer insulation film 42 is formed, and the above mentioned common electrode 31...

23/3,K/4 (Item 3 from file: 348)  
DIALOG(R) File 348:European Patents  
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00766564

Manufacturing method of colour liquid crystal display  
Herstellungsverfahren einer Flüssigkristall-Farbanzeigevorrichtung  
Procede de fabrication d'un affichage a cristal liquide en couleurs  
PATENT ASSIGNEE:

SEIKO INSTRUMENTS INC., (839492), 8 Nakase 1-chome, Mihama-ku, Chiba-shi, Chiba 261, (JP), (applicant designated states: DE;FR;GB;NL)  
SHINTO PAINT COMPANY, LIMITED, (664851), 10-73, Minamitsukaguchi-cho 6-chome, Amagasaki-shi Hyogo 661, (JP), (applicant designated states: DE;FR;GB;NL)

INVENTOR:

Suginoya, Mitsuru, c/o Seiko Instruments Inc., 8, Nakase 1-chome, Mihama-ku, Chiba-shi, Chiba, (JP)  
Motte, Shunichi, c/o Seiko Instruments Inc., 8, Nakase 1-chome, Mihama-ku, Chiba-shi, Chiba, (JP)  
Fukuchi, Takakazu, c/o Seiko Instruments Inc., 8, Nakase 1-chome, Mihama-ku, Chiba-shi, Chiba, (JP)  
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Okada, Yoshikatsu, c/o Shinto Paint Co. Ltd., 10-73, Minamitsukaguchi-cho 6-chome, Amagasaki-shi, Hyogo, (JP)  
Sakurai, Akiko, c/o Shinto Paint Co. Ltd., 10-73, Minamitsukaguchi-cho 6-chome, Amagasaki-shi, Hyogo, (JP)

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PATENT (CC, No, Kind, Date): EP 718664 A2 960626 (Basic)  
EP 718664 A3 970108

APPLICATION (CC, No, Date): EP 95309428 951222;

PRIORITY (CC, No, Date): JP 94320989 941222

DESIGNATED STATES: DE; FR; GB; NL

INTERNATIONAL PATENT CLASS: G02F-001/1335;

ABSTRACT WORD COUNT: 140

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SPEC A	(English)	EPAB96	2813
Total word count - document A			3282
Total word count - document B			0
Total word count - documents A + B			3282

...SPECIFICATION quality.

Figs. 2a and 2b are sectional and frontal views of a prior art colour liquid crystal display. In the figures, the reference numerals denote a glass substrate 11, transparent electrodes 12 composed of ITO or the like and patterned into stripes, colour filters 13 created on the transparent electrodes 12 by way of electro-deposition, light shielding layers 14 formed only in the gaps between colour filters by applying a photosensitive substance containing a light shielding substance such as carbon on the colour filters 13 and by exposing and developing it from...

...15 on which transparent electrodes 16 and thin film transistors 17 are formed. The colour liquid crystal display is formed by pasting the colour filter substrate 11 and the thin film transistor substrate...to the present invention.

(First Embodiment)

Fig. 1 shows a section view of a multicolour liquid crystal display according to the present invention. In the figure, the reference numerals denotes a glass substrate 1, transparent electrodes 2 composed of ITO or the like and patterned into stripes, colour filters 3...

...electrodes 2 by way of electro-deposition so that their shape coincides with a pixel, light shielding layers 4 formed by applying a photosensitive substance containing a light shielding substance such as carbon on the colour filters 3 and by exposing and developing it from...

23/3,K/5 (Item 4 from file: 348)

DIALOG(R)File 348:European Patents

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00340825

Color liquid crystal display device and method for driving same  
 Farbflussigkristall-Anzeigevorrichtung und ihr Ansteuerungsverfahren  
 Dispositif d'affichage a cristal liquide en couleur et son procede de  
 commande

PATENT ASSIGNEE:

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 Chiyoda-ku, Tokyo, (JP), (Proprietor designated states: all)

INVENTOR:

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 Tsubota, Hiroyoshi, 5-8-13, Minamishinagawa, Shinagawa-ku Tokyo, (JP)

LEGAL REPRESENTATIVE:

Wachtershauser, Gunter, Prof. Dr. (12711), Patentanwalt, Tal 29, 80331  
 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 338412 A2 891025 (Basic)  
 EP 338412 A3 910102  
 EP 338412 B1 950329  
 EP 338412 B2 000510

APPLICATION (CC, No, Date): EP 89106561 890413;

PRIORITY (CC, No, Date): JP 8896856 880421; JP 88274462 881101

DESIGNATED STATES: CH; DE; FR; GB; LI; NL

INTERNATIONAL PATENT CLASS: G02F-001/133

ABSTRACT WORD COUNT: 200

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
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CLAIMS B	(English)	200019	462
CLAIMS B	(German)	200019	363
CLAIMS B	(French)	200019	507
SPEC B	(English)	200019	7344
Total word count - document A			0
Total word count - document B			8676
Total word count - documents A + B			8676

...SPECIFICATION were overlapped with the light shielding layers. And further an overcoat film (leveling layer) of **transparent acrylic resin** was formed thereon.

As mentioned, the surface leveling was thus executed by forming such overcoat...

...1056 column electrodes for color filters were electrodeposited on a glass substrate, and R-G-B **three color** filters having a thickness of 2.0 ( $\mu$ m) were formed by electrodeposition. And light shielding layers equal in thickness thereto were formed by printing in the space between the color filters.

An overcoat **film** of transparent acrylic resin was formed on the color filters, and further it was coated...

26/3,K/1 (Item 1 from file: 348)  
DIALOG(R) File 348:European Patents  
(c) 2000 European Patent Office. All rts. reserv.

00930852

LIQUID CRYSTAL DISPLAY AND ELECTRONICS EQUIPMENT USING THE SAME  
FLUSSIGKRISTALLANZEIGE UND ELEKTRONISCHE BAUGRUPPE MIT DEREN VERWENDUNG  
AFFICHAGE A CRISTAUX LIQUIDES ET MATERIEL ELECTRONIQUE L'UTILISANT

PATENT ASSIGNEE:

SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome,  
Shinjuku-ku, Tokyo 163, (JP), (applicant designated states: DE;GB)

INVENTOR:

MURAMATSU, Eiji, Seiko Epson Corp, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken  
392, (JP)

LEGAL REPRESENTATIVE:

Hoffmann, Eckart, Dipl.-Ing. (5571), Patentanwalt, Bahnhofstrasse 103,  
82166 Grafelfing, (DE)

PATENT (CC, No, Kind, Date): EP 871060 A1 981014 (Basic)

WO 9805999 980212

APPLICATION (CC, No, Date): EP 97932988 970723; WO 97JP2543 970723

PRIORITY (CC, No, Date): JP 96207402 960806

DESIGNATED STATES: DE; GB

INTERNATIONAL PATENT CLASS: G02F-001/1345; G02F-001/1335;

ABSTRACT WORD COUNT: 98

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
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CLAIMS A	(English)	9842	530
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SPEC A	(English)	9842	4380
--------	-----------	------	------

Total word count - document A	4910
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Total word count - document B	0
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Total word count - documents A + B	4910
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...SPECIFICATION is constituted as follows. That is, the polarizing plate 6 quite generally used in the **liquid-crystal display** device is increased in area, and the polarizing plate 6 is simply fixed to the...

...processing step need not be performed to arrange the second light-shielding member, and the **liquid-crystal display** device is extremely economical with respect to the number of parts or the number of ...

...6a operating as the light-shielding member in this embodiment can be formed in an **arbitrary pattern** which can exercise sufficient light-shielding performance. Therefore, the driver IC 12 can be reliably ...

26/3,K/2 (Item 2 from file: 348)  
DIALOG(R) File 348:European Patents  
(c) 2000 European Patent Office. All rts. reserv.

00271757

Electrode structure for use in an electro-optical device.

Elektrodenstruktur zur Anwendung in einer elektro-optischen Vorrichtung.

Structure d'electrode pour l'utilisation dans un dispositif electro-optique.

PATENT ASSIGNEE:

SEIKO INSTRUMENTS INC., (839490), 31-1, Kameido 6-chome Koto-ku, Tokyo  
136, (JP), (applicant designated states: DE;FR;GB;IT)

INVENTOR:

Tsunoda, Yuki Yoshi, c/o SEIKO INSTRUMENTS INC. 31-1, Kameido 6-chome,  
Koto-ku Tokyo, (JP)

Sakai, Tohru, c/o SEIKO INSTRUMENTS INC. 31-1, Kameido 6-chome, Koto-ku  
Tokyo, (JP)

LEGAL REPRESENTATIVE:

Miller, Joseph et al (33871), J. MILLER & CO. 34 Bedford Row, Holborn,  
London WC1R 4JH, (GB)

PATENT (CC, No, Kind, Date): EP 265217 A2 880427 (Basic)  
EP 265217 A3 890111  
EP 265217 B1 930303

APPLICATION (CC, No, Date): EP 87309237 871020;

PRIORITY (CC, No, Date): JP 86251075 861022

DESIGNATED STATES: DE; FR; GB; IT

INTERNATIONAL PATENT CLASS: G02F-001/133; G02F-001/03;

ABSTRACT WORD COUNT: 51

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	386
CLAIMS B	(German)	EPBBF1	335
CLAIMS B	(French)	EPBBF1	449
SPEC B	(English)	EPBBF1	2005
Total word count - document A			0
Total word count - document B			3175
Total word count - documents A + B			3175

...SPECIFICATION colour display can easily be obtained and a television display can be produced. Known colour filter substrates are shown in Figures 2 and 3.

Referring to Figures 2 and 3, an electro-optical...

...printing. The ITO film 3 is formed by sputtering or vacuum deposition and is then patterned into an arbitrary shape.

Figure 2 shows a construction in which the ITO film 3 is formed on...

26/3,K/3 (Item 3 from file: 348)

DIALOG(R)File 348:European Patents

(c) 2000 European Patent Office. All rts. reserv.

00235762

ANTHRAQUINONE COMPOUNDS AND LIQUID-CRYSTAL COMPOSITION CONTAINING THEM.  
ANTHRACHINONVERBINDUNGEN UND FLUSSIGKRISTALLZUSAMMENSETZUNG, DIE DIESE  
ENTHALTEN.

COMPOSES A BASE D'ANTHRAQUINONE ET COMPOSITION A BASE DE CRISTAUX LIQUIDES  
LES CONTENANT.

PATENT ASSIGNEE:

MITSUBISHI KASEI CORPORATION, (208705), 5-2, Marunouchi 2-chome  
Chiyoda-ku, Tokyo 100, (JP), (applicant designated states:  
CH;DE;FR;GB;LI;NL)

INVENTOR:

MIURA, Konoe, 48-13, Tanacho, Midori-ku, Yokohama-shi Kanagawa 227, (JP)  
OZAWA, Tetsuo, 1603, Minamiyana, Hatano-shi Kanagawa 257, (JP)  
IWANAMI, Junko, 5487, Kamibaba, Shimosuwacho, Suwa-gun Nagano 393, (JP)

LEGAL REPRESENTATIVE:

Wachtershauser, Gunter, Dr. (12711), Tal 29, W-8000 Munchen 2, (DE)

PATENT (CC, No, Kind, Date): EP 244488 A1 871111 (Basic)  
EP 244488 A1 881117  
EP 244488 B1 920102  
WO 8702688 870507

APPLICATION (CC, No, Date): EP 86906446 861029; WO 86JP544 861029

PRIORITY (CC, No, Date): JP 85243601 851029; JP 85243602 851029; JP  
85243603 851029; JP 85290240 851223

DESIGNATED STATES: CH; DE; FR; GB; LI; NL

INTERNATIONAL PATENT CLASS: C09B-001/00; C07C-323/22; C09K-019/60;  
G02F-001/137

ABSTRACT WORD COUNT: 165

LANGUAGE (Publication,Procedural,Application): English; English; Japanese  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	568
CLAIMS B	(German)	EPBBF1	517
CLAIMS B	(French)	EPBBF1	672
SPEC B	(English)	EPBBF1	3364
Total word count - document A			0
Total word count - document B			5121
Total word count - documents A + B			5121

...SPECIFICATION active substances such as amines, amides and nitrile derivatives.

As the elements for performing the liquid crystal display by use of the liquid crystal composition according to the present invention, there may be used known liquid crystal display elements. In more detail, transparent electrodes of any arbitrary patterns are formed on each of two sheets of glass substrates, at least one of which the liquid crystal display element to be used. In this case, a space gap for the element is determined by the spacers. A preferred range of the space gap for the liquid crystal display element may be from 3 to 100 ( $\mu$ m), or more preferably from 5 to...

28/3,K/1 (Item 1 from file: 348)  
DIALOG(R) File 348:European Patents  
(c) 2000 European Patent Office. All rts. reserv.

00930852

**LIQUID CRYSTAL DISPLAY AND ELECTRONICS EQUIPMENT USING THE SAME**  
**FLUSSIGKRISTALLANZEIGE UND ELEKTRONISCHE BAUGRUPPE MIT DEREN VERWENDUNG**  
**AFFICHAGE A CRISTAUX LIQUIDES ET MATERIEL ELECTRONIQUE L'UTILISANT**  
PATENT ASSIGNEE:

SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome,  
Shinjuku-ku, Tokyo 163, (JP), (applicant designated states: DE;GB)

INVENTOR:

MURAMATSU, Eiji, Seiko Epson Corp, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken  
392, (JP)

LEGAL REPRESENTATIVE:

Hoffmann, Eckart, Dipl.-Ing. (5571), Patentanwalt, Bahnhofstrasse 103,  
82166 Grafelfing, (DE)

PATENT (CC, No, Kind, Date): EP 871060 A1 981014 (Basic)  
WO 9805999 980212

APPLICATION (CC, No, Date): EP 97932988 970723; WO 97JP2543 970723

PRIORITY (CC, No, Date): JP 96207402 960806

DESIGNATED STATES: DE; GB

INTERNATIONAL PATENT CLASS: G02F-001/1345; G02F-001/1335;

ABSTRACT WORD COUNT: 98

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9842	530
SPEC A	(English)	9842	4380
Total word count - document A			4910
Total word count - document B			0
Total word count - documents A + B			4910

...SPECIFICATION the semiconductor element can be joined to the substrate by using an ACF.

The second light -shielding member for shielding light being toward the semiconductor element may be arranged on a surface opposite to the surface, to which the semiconductor element is joined, of the surfaces of one of the substrates. Although the second light -shielding member shields light irradiated from the active surface of the semiconductor element like a conventional light -shielding layer, after the semiconductor element is joined to the substrate, a light -shielding member is fixed to the opposite surface of the substrate. For this reason, the light -shielding member can be arranged by only performing an extremely simple process without performing any complex process. In addition, since the problem of a change in capacitance obtained by arranging the light -shielding member need not be considered, the light -shielding member can be formed in an arbitrary pattern. Therefore, light can be reliably prevented from being irradiated on the semiconductor element with sufficient light-shielding performance.

The present invention can be also be applied to a...

...type, a light-shielding layer cannot be incidentally formed.

As a method of joining a semiconductor element to a substrate, a so-called face-down method which joins the semiconductor element to the substrate such that the active surface of the semiconductor element faces the substrate, and a so-called face-up method which joins the semiconductor element to the substrate such that the surface opposite to the active surface of the semiconductor element is in contact with the substrate are considered. The present invention can be applied to...

...down method of the above two methods. When the face-up method is employed, a light -shielding member is not arranged to cover the semiconductor element from the upper surface, but the semiconductor

element is joined to the substrate, and a light-shielding member is fixed to a position corresponding to the semiconductor element on the opposite surface of the substrate. In this case, as in the present invention, light irradiated from a surface other than the active surface side of the semiconductor element can be shielded.

According to the present invention, various concrete examples of a light-shielding...



3/3,K/1 (Item 1 from file: 348)  
DIALOG(R) File 348:European Patents  
(c) 2000 European Patent Office. All rts. reserv.

00930852

LIQUID CRYSTAL DISPLAY AND ELECTRONICS EQUIPMENT USING THE SAME  
FLUSSIGKRISTALLANZEIGE UND ELEKTRONISCHE BAUGRUPPE MIT DEREN VERWENDUNG  
AFFICHAGE A CRISTAUX LIQUIDES ET MATERIEL ELECTRONIQUE L'UTILISANT  
PATENT ASSIGNEE:

SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome,  
Shinjuku-ku, Tokyo 163, (JP), (applicant designated states: DE;GB)

INVENTOR:

MURAMATSU, Eiji, Seiko Epson Corp, 3-5, Owa 3-chome, Suwa-shi,  
Nagano-ken 392, (JP)

LEGAL REPRESENTATIVE:

Hoffmann, Eckart, Dipl.-Ing. (5571), Patentanwalt, Bahnhofstrasse 103,  
82166 Grafelfing, (DE)

PATENT (CC, No, Kind, Date): EP 871060 A1 981014 (Basic)  
WO 9805999 980212

APPLICATION (CC, No, Date): EP 97932988 970723; WO 97JP2543 970723

PRIORITY (CC, No, Date): JP 96207402 960806

DESIGNATED STATES: DE; GB

INTERNATIONAL PATENT CLASS: G02F-001/1345; G02F-001/1335;

ABSTRACT WORD COUNT: 98

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9842	530
SPEC A	(English)	9842	4380
Total word count - document A			4910
Total word count - document B			0
Total word count - documents A + B			4910

LIQUID CRYSTAL DISPLAY AND ELECTRONICS EQUIPMENT USING THE SAME  
INVENTOR:

MURAMATSU, Eiji ...

...ABSTRACT A1

A liquid-crystal display device has a pair of substrates (1, 2)  
which are opposite to each other and...

...active surface (12a) of the surfaces of the semiconductor element (12)  
is covered with a light-shielding member portion (16). Since the  
light-shielding member (16) completely shields light irradiated from  
the upper and side surfaces of the semiconductor...

SPECIFICATION TECHNICAL FIELD)

The present invention relates to a liquid-crystal display device  
which controls the orientation of a liquid crystal to display visible  
information. More specifically, the present invention relates to a  
liquid-crystal display device in which a semiconductor element is  
directly packaged (mounted) on a substrate constituting a liquid-crystal  
panel. The present invention also relates to an electronic device on  
which the liquid-crystal display device is mounted.

(BACKGROUND ART)

In recent years, liquid-crystal display devices are popularly  
used in various devices such as a navigation system, a television set...

...semiconductor element, e.g., a driver IC, on a liquid-crystal panel in  
manufacturing a liquid-crystal display device, a packaging method  
of directly joining a semiconductor element to one of a pair...

...is known. When the COG method is used, reduction in thickness and weight  
of a liquid-crystal display device, a very fine (micropattern)  
connection pitch, and the like are expected. However, when the...

...on a semiconductor element packaged on a substrate by the COG method, the following conventional **liquid-crystal display** device is disclosed in Japanese Unexamined Patent Publication No. 1-128534. FIG. 8 is a view showing a typical example of a **liquid-crystal display** device of this type. In a metal film forming process step for forming an active...

...chip, i.e., a semiconductor element, and the metal film 51 is used as a **light-shielding** layer for the IC chip 12.

However, in the conventional **liquid-crystal display** device, light irradiated from the upper or side surface of the IC chip, i.e...

...element to adversely affect the active surface of the semiconductor element are not considered. The **light-shielding** effect is not perfect.

In addition, in the conventional **liquid-crystal display** device, a **light-shielding** layer is consequently formed between the IC chip and the substrate. For this reason, a process for reducing the capacitance formed between the IC chip and the **light-shielding** layer, e.g., a process of forming the **light-shielding** layer as a special pattern must be performed. However, this process may be complex, and **light-shielding** performance may be degraded because the **light-shielding** layer is formed in a special pattern.

#### (DISCLOSURE OF INVENTION)

The present invention has been made in consideration of the above problems in a conventional **liquid-crystal display** device, and has as its object to provide a **liquid-crystal display** device, using the COG method, in which light can be prevented from being irradiated on...

...complex process.

In order to achieve the above object, according to the present invention, a **liquid-crystal display** device having a pair of substrates which are opposite to each other through a liquid...

...element other than the surface joined to one of the substrates is covered with a **light-shielding** member.

In this **liquid-crystal display** device, a **light-shielding** member is not formed between a semiconductor element and a substrate, and a portion, other...

File 344:Chinese Patents ABS Apr 1985-2000/Aug  
(c) 2000 European Patent Office  
File 347:JAPIO Oct 1976-2000/Jul(UPDATED 001114)  
(c) 2000 JPO & JAPIO  
File 350:Derwent WPIX 1963-2000/UD,UM &UP=200058  
(c) 2000 Derwent Info Ltd  
File 371:French Patents 1961-2000/BOPI 0045  
(c) 2000 INPI. All rts. reserv.

Set	Items	Description
S1	109308	LIQUID()CRYSTAL()DISPLAY? OR LCD
S2	3369	LIGHT()SHIELD?() (MEMBER? OR LAYER? OR SUBSTANCE? OR TAPE?)
S3	44587	LIGHT?(3N) (COVER? OR HIDE OR SHIELD? OR HIDING OR BLOCK? OR MASK?)
S4	2390	PREVENT?(3N) (IRRADIAT? OR ILLUMINAT?)
S5	279	(S3 OR S4) (3N) (COMPLETELY OR TOTALLY OR FULLY)
S6	36792	TRANSPAREN?(3N) (GLASS OR RESIN)
S7	40096	SEMICONDUCTOR?() ELEMENT?
S8	4290919	ARRANG? OR PLACED OR DEPOSIT? OR PLACING OR FORMED
S9	611	OPPOSITE() SURFACE(3N) SUBSTRATE?
<del>S10</del>	<del>6</del>	<del>SIMPLE(3N)MATRIX() METHOD?</del>
S11	38	FACE() DOWN() METHOD?
S12	3511	(LARGER OR BIGGER OR EXTEND?) (3N) POLARI?() PLATE? OR MOLDIN- G() RESIN?
S13	1954	ARBITRARY(3N) PATTERN?
S14	530	S1 AND (S2 OR S5)
S15	0	S14 AND S11
S16	0	S14 AND S7 AND S8 AND S9
<del>S17</del>	<del>5</del>	<del>S14 AND S7</del>
<del>S18</del>	<del>1</del>	<del>S14 AND S9</del>
S19	0	S14 AND S11
S20	0	S14 AND S12
S21	0	S14 AND S13
S22	23	S14 AND S6
S23	23	S22 AND S6
S24	171582	IC=G02F-001
<del>S25</del>	<del>18</del>	<del>S23 AND S24</del>

10/3,K/1 (Item 1 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2000 JPO & JAPIO. All rts. reserv.

06191833  
LIQUID CRYSTAL DISPLAY ELEMENT

PUB. NO.: 11-133384 [JP 11133384 A]  
PUBLISHED: May 21, 1999 (19990521)  
INVENTOR(s): KONISHI SHIRO  
APPLICANT(s): HITACHI CABLE LTD  
APPL. NO.: 09-295414 [JP 97295414]  
FILED: October 28, 1997 (19971028)

ABSTRACT

...value attains about 1.3, up to 8 line scanning is made possible by a **simple matrix method** and further, if a multiple matrix method, etc., are used, up to 32 line scanning...

10/3,K/2 (Item 2 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2000 JPO & JAPIO. All rts. reserv.

05650284 \*\*Image available\*\*  
LIQUID CRYSTAL DISPLAY DEVICE

PUB. NO.: 09-265084 [JP 9265084 A]  
PUBLISHED: October 07, 1997 (19971007)  
INVENTOR(s): SUZAKI TAKESHI  
APPLICANT(s): SANYO ELECTRIC CO LTD [000188] (A Japanese Company or Corporation), JP (Japan)  
TOTTORI SANYO ELECTRIC CO LTD [323436] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 08-072388 [JP 9672388]  
FILED: March 27, 1996 (19960327)

ABSTRACT

... has driving means for driving the liquid crystal cells at a high speed by a **simple matrix method** and the filter layers in which the light transmission characteristics of the green filter layers...

10/3,K/3 (Item 3 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2000 JPO & JAPIO. All rts. reserv.

05316421 \*\*Image available\*\*  
LIQUID CRYSTAL DEVICE AND ITS PRODUCTION

PUB. NO.: 08-271921 [JP 8271921 A]  
PUBLISHED: October 18, 1996 (19961018)  
INVENTOR(s): KAWADA HIROTAKA  
APPLICANT(s): SEIKO EPSON CORP [000236] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 07-076708 [JP 9576708]  
FILED: March 31, 1995 (19950331)

ABSTRACT

... provide a high precision liquid crystal device which attains a high quality display by a **simple matrix method** by flattening a step between a transparent electrode and a metal auxiliary electrode by using...

10/3,K/4 (Item 4 from file: 347)  
DIALOG(R)File 347:JAPIO

(c) 2000 JPO & JAPIO. All rts. reserv.

04594043

LIQUID CRYSTAL DISPLAY ELEMENT

PUB. NO.: 06-265943 [JP 6265943 A]  
PUBLISHED: September 22, 1994 (19940922)  
INVENTOR(s): TAKATO TAKAKI  
SAKAMOTO MASANORI  
APPLICANT(s): TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 05-054278 [JP 9354278]  
FILED: March 15, 1993 (19930315)  
JOURNAL: Section: P, Section No. 1846, Vol. 18, No. 674, Pg. 13,  
December 19, 1994 (19941219)

ABSTRACT

... contrast with which a color display and animation display can be  
obtained even by a **simple matrix method**.

10/3,K/5 (Item 5 from file: 347)  
DIALOG(R) File 347:JAPIO  
(c) 2000 JPO & JAPIO. All rts. reserv.

03412790 \*\*Image available\*\*  
PICTURE DISPLAY DEVICE

PUB. NO.: 03-075690 [JP 3075690 A]  
PUBLISHED: March 29, 1991 (19910329)  
INVENTOR(s): HATANO KAZUTOSHI  
APPLICANT(s): SHARP CORP [000504] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 01-211119 [JP 89211119]  
FILED: August 16, 1989 (19890816)  
JOURNAL: Section: P, Section No. 1217, Vol. 15, No. 242, Pg. 92, June  
21, 1991 (19910621)

ABSTRACT

...CONSTITUTION: The diagram is an example of the device being applied to a  
**simple matrix method** liquid crystal display device to realize a  
display resolution of 768 X 256 dots and...

10/3,K/6 (Item 1 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2000 Derwent Info Ltd. All rts. reserv.

011220619 \*\*Image available\*\*  
WPI Acc No: 1997-198544/199718  
XRPX Acc No: N97-164033

**Liquid crystal display device of simple matrix method - alters  
actuation waveform and duty for every display part for displaying  
differing colour according to applied voltage**

Patent Assignee: CASIO COMPUTER CO LTD (CASK )  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 9054300	A	19970225	JP 95228632	A	19950815	199718 B

Priority Applications (No Type Date): JP 95228632 A 19950815

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 9054300	A	8	G02F-001/133	

Liquid crystal display device of simple matrix method -

17/3,K/1 (Item 1 from file: 347)  
DIALOG(R) File 347:JAPIO  
(c) 2000 JPO & JAPIO. All rts. reserv.

04375027 \*\*Image available\*\*  
LIQUID CRYSTAL DISPLAY PANEL

PUB. NO.: 06-018927 [JP 6018927 A]  
PUBLISHED: January 28, 1994 (19940128)  
INVENTOR(s): HAMAGUCHI TAKUYA  
APPLICANT(s): DAINIPPON PRINTING CO LTD [000289] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 04-176991 [JP 92176991]  
FILED: July 03, 1992 (19920703)  
JOURNAL: Section: P, Section No. 1729, Vol. 18, No. 223, Pg. 140, April 21, 1994 (19940421)

LIQUID CRYSTAL DISPLAY PANEL

ABSTRACT

PURPOSE: To increase a contrast with high fineness and to facilitate production by providing **semiconductor elements** provided with **light shielding layers** containing metallic particles on a substrate...

... hermetically sealed between the substrates. The TFT substrate 10 has a transparent substrate 11, the **semiconductor elements** 12 formed integrally on the substrate 11 and pixel electrodes 20. The semiconductor driving elements 12 have the **light shielding layers** 10 formed on source electrodes 16 and drain electrodes 17 so as to shield a semiconductor layer 15. The **light shielding layers** 19 contain the metallic particles therein, have a high optical density and low reflectivity and can surely shut off the light for the **semiconductor elements** 12 without largely taking the width of the **light shielding layers**, unlike heretofore. In addition, the shielding layers are formable with a larger opening rate. The...

17/3,K/2 (Item 2 from file: 347)  
DIALOG(R) File 347:JAPIO  
(c) 2000 JPO & JAPIO. All rts. reserv.

04257792 \*\*Image available\*\*  
LIQUID CRYSTAL DISPLAY DEVICE

PUB. NO.: 05-249492 [JP 5249492 A]  
PUBLISHED: September 28, 1993 (19930928)  
INVENTOR(s): KAWATO TOMIO  
NUMANO YOSHINORI  
OUCHIDA YASUSHI  
APPLICANT(s): MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 04-051320 [JP 9251320]  
FILED: March 10, 1992 (19920310)  
JOURNAL: Section: P, Section No. 1670, Vol. 18, No. 7, Pg. 68, January 07, 1994 (19940107)

LIQUID CRYSTAL DISPLAY DEVICE

ABSTRACT

... liquid crystal uniformly on the whole surface of a liquid crystal panel and aligning a **light shielding layer** and a picture element electrode at high accuracy so that the numerical aperture of the liquid crystal panel is increased and that a **liquid crystal display** device having high luminance and high precision can be obtained...

...CONSTITUTION: This **liquid crystal display** device consists of a

first substrate 1 and a second substrate 4 facing to each...

... and picture element electrodes 9 on crosspoints of the gate leads and data leads, and **semiconductor elements** 15 connected to the picture element electrodes 9. The second substrate 4 has an opposite electrode 13. A **light shielding layer** 2 is formed on the first substrate 1 to surround the picture element electrodes 9.

17/3,K/3 (Item 3 from file: 347)  
DIALOG(R)File 347:JAPIO  
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02830934 \*\*Image available\*\*  
MOUNTING METHOD FOR **SEMICONDUCTOR ELEMENT** ON TRANSPARENT SUBSTRATE

PUB. NO.: 01-128534 [JP 1128534 A]  
PUBLISHED: May 22, 1989 (19890522)  
INVENTOR(s): ISHIHARA SHINICHIRO  
NAGATA SEIICHI  
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 62-287880 [JP 87287880]  
FILED: November 13, 1987 (19871113)  
JOURNAL: Section: E, Section No. 809, Vol. 13, No. 378, Pg. 12, August 22, 1989 (19890822)

MOUNTING METHOD FOR **SEMICONDUCTOR ELEMENT** ON TRANSPARENT SUBSTRATE

#### ABSTRACT

PURPOSE: To shield a light at an IC chip simultaneously during the manufacture of a **semiconductor element** and to further reduce the stray capacitance due to wirings by forming a light shielding...

...light shielding gate electrode 2 is formed of Cr on a glass substrate 1. A **light shielding layer** 3 of a COG region is held at a ground potential or a predetermined potential...

... the forming accuracy of the bump itself is deteriorated. In order to complete as a **liquid crystal display**, an opposite glass substrate containing a color filter, opposite electrode, etc., is disposed on a...

17/3,K/4 (Item 4 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2000 JPO & JAPIO. All rts. reserv.

01705728 \*\*Image available\*\*  
COLOR **LIQUID CRYSTAL DISPLAY** DEVICE

PUB. NO.: 60-184228 [JP 60184228 A]  
PUBLISHED: September 19, 1985 (19850919)  
INVENTOR(s): HOTTA SHIGEHISA  
APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 59-039590 [JP 8439590]  
FILED: March 01, 1984 (19840301)  
JOURNAL: Section: P, Section No. 428, Vol. 10, No. 38, Pg. 53, February 14, 1986 (19860214)

COLOR **LIQUID CRYSTAL DISPLAY** DEVICE

#### ABSTRACT

... layers red, green, and blue to constitute a color filter and dyeing parts on a **semiconductor element** red, green, and blue also to constitute a **light shielding layer**.



...elements of layers 9a-9c are dyed red, green, and blue, and parts on the semiconductor element are dyed red, green, and blue also to form and arrange parts 6 and 13a...

...8 and 13c. Parts 13a-13c are laminated in the same position to form the light shielding layer.

17/3,K/5 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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011728840 \*\*Image available\*\*  
WPI Acc No: 1998-145750/199813  
XRPX Acc No: N98-115279

Liquid crystal display for computer or television - has light shielding device covering all parts of semiconductor element, apart from active surface, to shut-off light reflecting from upper and side surfaces

Patent Assignee: SEIKO EPSON CORP (SHIH )

Inventor: MURAMATSU E

Number of Countries: 021 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9805999	A1	19980212	WO 97JP2543	A	19970723	199813 B
EP 871060	A1	19981014	EP 97932988	A	19970723	199845
			WO 97JP2543	A	19970723	
JP 10501462	X	19981208	WO 97JP2543	A	19970723	199908
			JP 98501462	A	19970723	
CN 1198821	A	19981111	CN 97191042	A	19970723	199913
KR 99064039	A	19990726	WO 97JP2543	A	19970723	200044
			KR 98702517	A	19980406	

Priority Applications (No Type Date): JP 96207402 A 19960806

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9805999	A1	J	28	G02F-001/1345	
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Designated States (National): CN JP KR US

Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

EP 871060	A1	E		G02F-001/1345	Based on patent WO 9805999
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Designated States (Regional): DE GB

JP 10501462	X			G02F-001/1345	Based on patent WO 9805999
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CN 1198821	A			G02F-001/1345	
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KR 99064039	A			G02F-001/1345	Based on patent WO 9805999
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Liquid crystal display for computer or television...

...has light shielding device covering all parts of semiconductor element, apart from active surface, to shut-off light reflecting from upper and side surfaces

...Abstract (Basic): The liquid crystal display has a pair of substrates (1, 2) disposed in an opposed state, and a semiconductor element (12) bonded directly to a surface of the substrate (1). A portion of the surface of the semiconductor element (12), other than an active surface (12a) is covered with a light shielding member (16)...

...The light shielding member (16) completely shuts off the light radiating from the upper surface and side surfaces of the semiconductor element (12) and bonded surface between the semiconductor element (12) and substrate (1)...

...ADVANTAGE - Erroneous operation of semiconductor element (12) can be prevented...

18/3,K/1 (Item 1 from file: 347)  
DIALOG(R) File 347:JAPIO  
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05985209 \*\*Image available\*\*  
LIQUID CRYSTAL DISPLAY DEVICE

PUB. NO.: 10-268309 [JP 10268309 A]  
PUBLISHED: October 09, 1998 (19981009)  
INVENTOR(s): SHIN GENKOU

SUZUKI KUNIAKI  
SAI MOTONARI

APPLICANT(s): FURONTETSUKU KK [000000] (A Japanese Company or Corporation),  
JP (Japan)

APPL. NO.: 09-068718 [JP 9768718]

FILED: March 21, 1997 (19970321)

LIQUID CRYSTAL DISPLAY DEVICE

#### ABSTRACT

PROBLEM TO BE SOLVED: To provide a liquid crystal display device which can obtain a light display with a wide field angle, eliminates the need...

...90 deg. plus or minus 1 deg. pretilt angle are provided in order on the opposite surface of one substrate while many pixel electrodes 21 are provided the opposite surface of the other substrate as to cover the display area of the liquid crystal; and a conductive light shield member 23 which is electrically insulated from the pixel electrodes and positioned around many pixel electrodes...

...or minus 1 deg. pretilt angle is provided on the pixel electrodes 21 and conductive light shield member 23, and the conductive light shield member 23 is held at the same potential with a common electrode 18.

25/3,K/1 (Item 1 from file: 347)  
DIALOG(R) File 347:JAPIO  
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06512405 \*\*Image available\*\*  
COLOR FILTER FOR REFLECTION TYPE LIQUID CRYSTAL DISPLAY AND ITS  
MANUFACTURE

PUB. NO.: 20-00098122 [JP 2000098122 A]  
PUBLISHED: April 07, 2000 (20000407)  
INVENTOR(s): HANEDA AKIO  
TAKAGI TOSHIKI  
APPLICANT(s): TOPPAN PRINTING CO LTD  
APPL. NO.: 10-263472 [JP 98263472]  
FILED: September 17, 1998 (19980917)

COLOR FILTER FOR REFLECTION TYPE LIQUID CRYSTAL DISPLAY AND ITS  
MANUFACTURE

INTL CLASS: G02B-005/20; G02F-001/1335

#### ABSTRACT

PROBLEM TO BE SOLVED: To provide a low-price color filter for a reflection type liquid crystal display device and a manufacturing method thereof without damaging the function of a positioning marker in the color filter for the reflection type liquid crystal display without a matrix form light shielding layer .

SOLUTION: A transparent substrate 1 is provided with color filter pixels 2 almost on the...

... are formed on a light- reflecting metallic film 7 by using a color photo-sensitive resin 4. And, the transparent substrate 1 is provided with a light-reflecting metallic film 7 thereon, and applied with...

25/3,K/2 (Item 2 from file: 347)  
DIALOG(R) File 347:JAPIO  
(c) 2000 JPO & JAPIO. All rts. reserv.

06410840 \*\*Image available\*\*  
MANUFACTURE OF LIQUID CRYSTAL DISPLAY DEVICE AND COLOR FILTER  
SUBSTRATE

PUB. NO.: 11-352496 [JP 11352496 A]  
PUBLISHED: December 24, 1999 (19991224)  
INVENTOR(s): MORIMOTO HIROKAZU  
APPLICANT(s): TOSHIBA CORP  
APPL. NO.: 10-158010 [JP 98158010]  
FILED: June 05, 1998 (19980605)

MANUFACTURE OF LIQUID CRYSTAL DISPLAY DEVICE AND COLOR FILTER  
SUBSTRATE

INTL CLASS: G02F-001/1339 ; G02B-005/20; G02F-001/1335

#### ABSTRACT

PROBLEM TO BE SOLVED: To provide a liquid crystal display which is easily formed with low cost, has columnar spacers without chipping of their heights...

...without any display non-uniformity in a large area display as well.

SOLUTION: In a liquid crystal display , a color filter 23 having each of colored layers R, G, B arranged in a...

... substrate 21 adjacent to a counter substrate 6 so as to block openings of a **light shielding layer** 22 (black matrix) and columnar spacers 24 are provided on the **light shielding layer** 22. The color filter 23 and the columnar spacers 24 are formed by coloring an accepting layer made of **transparent resin** formed on the counter substrate 6 with dyes, giving colored liquids containing dyes (ink) with...

25/3,K/3 (Item 3 from file: 347)

DIALOG(R)File 347:JAPIO

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06096884 \*\*Image available\*\*

**LIQUID CRYSTAL DISPLAY DEVICE**

PUB. NO.: 11-038403 [JP 11038403 A]  
PUBLISHED: February 12, 1999 (19990212)  
INVENTOR(s): YANAGAWA KAZUHIKO  
OGAWA KAZUHIRO  
ASHIZAWA KEIICHIRO  
APPLICANT(s): HITACHI LTD  
APPL. NO.: 09-193856 [JP 97193856]  
FILED: July 18, 1997 (19970718)

**LIQUID CRYSTAL DISPLAY DEVICE**

INTL CLASS: G02F-001/1335 ; G02F-001/1341

ABSTRACT

PROBLEM TO BE SOLVED: To shorten the liquid crystal sealing time of a **liquid crystal display** element and to reduce the cost thereof by forming a **light shielding layer** near a liquid crystal sealing port and the one display region of color filters and...  
...the opposite side to a nonrectilinear shape.

SOLUTION: The display region VZ of an upper **transparent glass** substrate 1a and the light shielding region SZ on the outside of the display region between the display region VZ and a sealing material SM are provided with the **light shielding layer** BM and the color filters CF. The **light shielding layer** BM of the light shielding region SZ on the outside of the display region near...

25/3,K/4 (Item 4 from file: 347)

DIALOG(R)File 347:JAPIO

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06065495 \*\*Image available\*\*

REFLECTION TYPE **LIQUID CRYSTAL DISPLAY DEVICE**

PUB. NO.: 11-007006 [JP 11007006 A]  
PUBLISHED: January 12, 1999 (19990112)  
INVENTOR(s): SAKATA HIDEFUMI  
CHINO EIJI  
APPLICANT(s): SEIKO EPSON CORP  
APPL. NO.: 09-158270 [JP 97158270]  
FILED: June 16, 1997 (19970616)

REFLECTION TYPE **LIQUID CRYSTAL DISPLAY DEVICE**

INTL CLASS: G02F-001/1335

ABSTRACT

PROBLEM TO BE SOLVED: To provide the structure of the reflection type **liquid crystal display** device which can obtain high visibility while holding lightness and contrast of display without lowering...

... substrate 10. In the optical modulating layer 42 of the optical modulating filter 40, many **light shield layers** 44 made of black resin which absorbs visible light are sealed with **transparent resin** almost at right angles to the lamination surface or slantingly to some extent from the...

25/3,K/5 (Item 5 from file: 347)

DIALOG(R)File 347:JAPIO

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05887839 \*\*Image available\*\*

**LIQUID CRYSTAL DISPLAY DEVICE**

PUB. NO.: 10-170939 [JP 10170939 A]

PUBLISHED: June 26, 1998 (19980626)

INVENTOR(s): OTA MASUYUKI

YANAGAWA KAZUHIKO

ASHIZAWA KEIICHIRO

MISHIMA YASUYUKI

OGAWA KAZUHIRO

OE MASATO

KONDO KATSUMI

YANAI MASAHIRO

APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 10-004619 [JP 984619]

FILED: January 13, 1998 (19980113)

**LIQUID CRYSTAL DISPLAY DEVICE**

INTL CLASS: G02F-001/1343 ; G02B-005/00; G02F-001/1335 ; G02F-001/136

ABSTRACT

PROBLEM TO BE SOLVED: To prevent the deterioration in display contrast by **completely shielding** the **light** leakage caused from the portion of the electric field generated between video signal lines and...

... electrodes PX and CT) are emitted to the display surface side in an upper section **transparent glass** substrate SUB2 side so that the matrix BM is formed to prevent the deterioration in...

25/3,K/6 (Item 6 from file: 347)

DIALOG(R)File 347:JAPIO

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05615571 \*\*Image available\*\*

**ACTIVE MATRIX SUBSTRATE AND ITS PRODUCTION**

PUB. NO.: 09-230371 [JP 9230371 A]

PUBLISHED: September 05, 1997 (19970905)

INVENTOR(s): KOBAYASHI IKUNORI

YAMAMOTO MUTSUMI

MINO YOSHIKO

APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 08-031788 [JP 9631788]

FILED: February 20, 1996 (19960220)

INTL CLASS: G02F-001/136 ; G02F-001/1335 ; H01L-029/786

ABSTRACT

PROBLEM TO BE SOLVED: To embody a matrix substrate for obtaining a **liquid crystal display** device having excellent image quality by improving an opening rate and diminishing the capacitance of the capacitors formed

between the wirings of switching elements and light shielding layers .

...

...SOLUTION: Black matrices 2 consisting of Cr are previously formed on a glass substrate and transparent display electrodes 4a, TFTs and the row wirings 7 and column wirings 8 thereof are...

...made small in proportion to the capacitance and the deterioration of the images of the liquid crystal display device is suppressed.

25/3,K/7 (Item 7 from file: 347)

DIALOG(R)File 347:JAPIO

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05596673 \*\*Image available\*\*

LIQUID CRYSTAL DISPLAY DEVICE

PUB. NO.: 09-211473 [JP 9211473 A]

PUBLISHED: August 15, 1997 (19970815)

INVENTOR(s): SUZUKI MASAHIKO

ISONO TSUTOMU

OGIICHI KIMITOSHI

ISHII AKIRA

OWADA JUNICHI

APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP (Japan)

HITACHI DEVICE ENG CO LTD [486661] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 08-307848 [JP 96307848]

FILED: November 19, 1996 (19961119)

LIQUID CRYSTAL DISPLAY DEVICE

INTL CLASS: G02F-001/1339 ; G02B-005/00; G02F-001/1335

ABSTRACT

PROBLEM TO BE SOLVED: To provide a liquid crystal display device which has excellent reliability and display quality and is wide in a display region...

... both do not overlap over nearly the entire circumference of the sealing material SL. A light shielding tape (TAPE (in Figure) is stuck to the rear surface of a transparent glass substrate SUB 1 from the end of the substrate SUB 1 including the parts where...

25/3,K/8 (Item 8 from file: 347)

DIALOG(R)File 347:JAPIO

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05481915 \*\*Image available\*\*

COLOR LIQUID CRYSTAL DISPLAY DEVICE

PUB. NO.: 09-096715 [JP 9096715 A]

PUBLISHED: April 08, 1997 (19970408)

INVENTOR(s): FUJIBAYASHI SADAYASU

NONAKA MASANOBU

NOSE SHINICHI

APPLICANT(s): TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 07-253408 [JP 95253408]

FILED: September 29, 1995 (19950929)

COLOR LIQUID CRYSTAL DISPLAY DEVICE

INTL CLASS: G02B-005/20; G02F-001/1335

ABSTRACT

PROBLEM TO BE SOLVED: To provide a color liquid crystal display device in which leakage of light from the outside can be prevented and production of...

...SOLUTION: This color liquid crystal display device is produced by preparing a color filter substrate by forming a color filter layer 7 having a light - shielding layer 9 around a display area, an over coating layer 6 and a transparent electrode layer on a glass plate, preparing a transparent electrode substrate by forming a transparent electrode layer on glass substrate, and then laminating these substrates with a sealing agent in such a manner that the electrodes face each other. The light -shielding layer 9 has many partial light -shielding layers 9a completely separated from each other in the area which faces the sealing agent. The partial light -shielding layers 9a are arranged to form a lattice.

25/3,K/9 (Item 9 from file: 347)

DIALOG(R)File 347:JAPIO

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05127305 \*\*Image available\*\*

LIQUID CRYSTAL DISPLAY DEVICE

PUB. NO.: 08-082805 [JP 8082805 A]

PUBLISHED: March 26, 1996 (19960326)

INVENTOR(s): NISHIKAWA RYUJI

APPLICANT(s): SANYO ELECTRIC CO LTD [000188] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 06-216118 [JP 94216118]

FILED: September 09, 1994 (19940909)

LIQUID CRYSTAL DISPLAY DEVICE

INTL CLASS: G02F-001/1345 ; G02F-001/136

ABSTRACT

...CONSTITUTION: Gate lines 16L extended from pixel parts are formed on a transparent substrate 10 of glass , etc., formed with interlayer insulating layers coating light shielding layers . The gate lines 16L are connected to external driving circuit elements by TAB at gate...

25/3,K/10 (Item 10 from file: 347)

DIALOG(R)File 347:JAPIO

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04593977 \*\*Image available\*\*

LIQUID CRYSTAL DISPLAY ELEMENT

PUB. NO.: 06-265877 [JP 6265877 A]

PUBLISHED: September 22, 1994 (19940922)

INVENTOR(s): OGAWARA MASAO

APPLICANT(s): OPTREX CORP [472021] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 05-078902 [JP 9378902]

FILED: March 12, 1993 (19930312)

JOURNAL: Section: P, Section No. 1845, Vol. 18, No. 670, Pg. 158, December 16, 1994 (19941216)

LIQUID CRYSTAL DISPLAY ELEMENT

INTL CLASS: G02F-001/1335 ; G02F-001/1335

ABSTRACT

PURPOSE: To provide the liquid crystal display element which is bright, lessens blotting of colors and has a good contrast ratio by making the apertures by light shielding layers larger than the shapes of pixels and forming the liquid crystal display element as a normally black type...

...CONSTITUTION: This liquid crystal display element is composed of substrates 1A, 1B consisting of glass, plastic, etc., transparent electrodes 2A, 2B consisting of In(sub 2)O(sub 2)-SnO(sub 2) (ITO...

...of organic resins, such as polyimide, polyamide, silicone, and inorganic oxides, such as SiO<sub>2</sub>, the light shielding layers 4 consisting of thin films of metals, etc., color filter layers 5, an insulating layer 6, a liquid crystal layer 7 and polarizing films 8A, 8B. The light shielding layers 4 and the color filter layers 5 are formed on at least one substrate 1B. The light shielding layers 4 are formed of the thin films and the width thereof is set smaller than the width between the pixels by the electrodes 2A, 2B. Further, the liquid crystal display element is the normally black type.

25/3,K/11 (Item 11 from file: 347)  
DIALOG(R)File 347:JAPIO  
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04232496 \*\*Image available\*\*  
LIQUID CRYSTAL DISPLAY DEVICE AND ITS PRODUCTION

PUB. NO.: 05-224196 [JP 5224196 A]  
PUBLISHED: September 03, 1993 (19930903)  
INVENTOR(s): YAJIMA TAKASHI  
AOKI AKIRA  
SUZUKI MASAHIKO  
MATSUMOTO SHINZO  
IWATA TOSHIRO  
APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 04-029196 [JP 9229196]  
FILED: February 17, 1992 (19920217)  
JOURNAL: Section: P, Section No. 1657, Vol. 17, No. 669, Pg. 100,  
December 09, 1993 (19931209)

LIQUID CRYSTAL DISPLAY DEVICE AND ITS PRODUCTION

INTL CLASS: G02F-001/1335 ; G02F-001/136 ; G09F-009/00  
ABSTRACT

PURPOSE: To provide the liquid crystal display device which is strong to the light leaking from the periphery, is cleaned in the cutting shape of substrates and is improved in display quality and reliability by forming a light shielding layer outward from the inner side of sealing patterns...

...CONSTITUTION: The light shielding film BM is provided on an upper transparent glass substrate SUB 2 side in such a manner that external light is not made incident...

25/3,K/12 (Item 12 from file: 347)  
DIALOG(R)File 347:JAPIO  
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03977133 \*\*Image available\*\*  
OPTICAL WRITE TYPE LIQUID CRYSTAL DISPLAY DEVICE

PUB. NO.: 04-342233 [JP 4342233 A]  
PUBLISHED: November 27, 1992 (19921127)



INVENTOR(s): NARUTAKI YOZO  
NAKAMURA HISAKAZU  
APPLICANT(s): SHARP CORP [000504] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 03-114846 [JP 91114846]  
FILED: May 20, 1991 (19910520)  
JOURNAL: Section: P, Section No. 1522, Vol. 17, No. 194, Pg. 111,  
April 15, 1993 (19930415).

**OPTICAL WRITE TYPE LIQUID CRYSTAL DISPLAY DEVICE**

INTL CLASS: G02F-001/135 ; G02F-001/1335 ; G02F-001/1347

**ABSTRACT**

...CONSTITUTION: The optical write type liquid crystal display device is constituted by laminating a first liquid crystal cell to which a voltage is...

...second liquid crystal cell for compensation. A first liquid crystal cell is provided with a transparent glass substrate 11, a transparent electrode 12, an a-Si(amorphous silicon) layer 13, a light shielding layer 14, a dielectric mirror 15, oriented films 16, 22 and seal members 17, 13. A second liquid crystal cell is provided with a transparent glass substrate, an oriented film and a seal member 25. In a space formed by each...

... come into contact with each other, become orthogonal, and are stuck and fixed by a transparent resin hang stickiness.

25/3,K/13 (Item 13 from file: 347)  
DIALOG(R) File 347:JAPIO  
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03238299 \*\*Image available\*\*  
**LIQUID CRYSTAL DISPLAY DEVICE**

PUB. NO.: 02-213799 [JP 2213799 A]  
PUBLISHED: August 24, 1990 (19900824)  
INVENTOR(s): ITO HIROSHI  
TSUKAGOSHI SHUICHI  
KUGO MASARU  
APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP  
(Japan)  
HITACHI AUTOMOT ENG CO LTD [470863] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 01-033614 [JP 8933614]  
FILED: February 15, 1989 (19890215)  
JOURNAL: Section: P, Section No. 1129, Vol. 14, No. 512, Pg. 47,  
November 09, 1990 (19901109)

**LIQUID CRYSTAL DISPLAY DEVICE**

INTL CLASS: G12B-011/00; G02F-001/1335 ; G09F-009/00

**ABSTRACT**

... to improve display visibility by varying the degree of diffusion of reflected light in a liquid crystal display window frame part and the other part to prevent the extreme diffusion of the transmitted...

... to 2c facing the trisected display parts is disposed on the front surface of the liquid crystal display unit 3. The panel 2 consists of, for example, a transparent synthetic resin sheet which has a small sheet thickness and the part exclusive of the display window is provided with a light shielding layer, such as black printing. Further, the surface of the panel 2 is subjected to a...

25/3,K/14 (Item 14 from file: 347)  
DIALOG(R) File 347:JAPIO  
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03143019 \*\*Image available\*\*  
**LIQUID CRYSTAL DISPLAY DEVICE**

PUB. NO.: 02-118519 [JP 2118519 A]  
PUBLISHED: May 02, 1990 (19900502)  
INVENTOR(s): MOROZUMI SHINJI  
APPLICANT(s): SEIKO EPSON CORP [000236] (A Japanese Company or Corporation)  
, JP (Japan)  
APPL. NO.: 01-253198 [JP 89253198]  
FILED: September 28, 1989 (19890928)  
JOURNAL: Section: P, Section No. 1080, Vol. 14, No. 340, Pg. 146, July  
23, 1990 (19900723)

**LIQUID CRYSTAL DISPLAY DEVICE**

INTL CLASS: G02F-001/1335

ABSTRACT

... blurring of color tones and to make sharp display with a high contrast by providing **light shielding layers** which do not allow the passage of light to the boundary parts between plural color...

...CONSTITUTION: A water soluble organic resin layer is formed on a **transparent glass** substrate 20 and red, blue and green dyes are printed thereon to form the patterns...

25/3,K/15 (Item 15 from file: 347)  
DIALOG(R) File 347:JAPIO  
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02564034 \*\*Image available\*\*  
**LIQUID CRYSTAL DISPLAY DEVICE AND ITS PRODUCTION**

PUB. NO.: 63-180934 [JP 63180934 A]  
PUBLISHED: July 26, 1988 (19880726)  
INVENTOR(s): TATEMACHI TOSHIO  
TSUDA KEISUKE  
KUMAKAWA KATSUHIKO  
KAMIMURA TSUYOSHI  
YAMAZOE HIROSHI  
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company  
or Corporation), JP (Japan)  
APPL. NO.: 62-012903 [JP 8712903]  
FILED: January 22, 1987 (19870122)  
JOURNAL: Section: P, Section No. 794, Vol. 12, No. 458, Pg. 72,  
December 02, 1988 (19881202)

**LIQUID CRYSTAL DISPLAY DEVICE AND ITS PRODUCTION**

INTL CLASS: G02F-001/133 ; G02F-001/133 ; G02B-005/20

ABSTRACT

... color display of excellent contrast by forming scanning electrodes on a filter layer and embedding **light shielding layers** between respective color filters which are picture elements...

...CONSTITUTION: The color filter layer 2 is provided on a **transparent glass** substrate 1 and the **light shielding layer** 3 is formed like a mesh in the spacings between the respective colors of the...

... consisting of a polyimide resin is provided on the color filter layer 2 and the **light shielding layer** 3 and a transparent conductive film is

formed over the entire surface on the smooth...

25/3,K/16 (Item 16 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2000 JPO & JAPIO. All rts. reserv.

01686225 \*\*Image available\*\*  
MATRIX TYPE LIQUID CRYSTAL DISPLAY DEVICE

PUB. NO.: 60-164725 [JP 60164725 A]  
PUBLISHED: August 27, 1985 (19850827)  
INVENTOR(s): KIKUCHI ISAKO  
TATEMACHI TOSHIO  
OOTA ISAO  
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company  
or Corporation), JP (Japan)  
APPL. NO.: 59-019444 [JP 8419444]  
FILED: February 07, 1984 (19840207)  
JOURNAL: Section: P, Section No. 419, Vol. 10, No. 7, Pg. 162, January  
11, 1986 (19860111)

MATRIX TYPE LIQUID CRYSTAL DISPLAY DEVICE

INTL CLASS: G02F-001/133 ; G09F-009/00

#### ABSTRACT

... an unnecessary reflected light quantity which causes a drop of a contrast by providing a light shielding layer having a prescribed thickness between adjacent electrodes, and holding a gap of a pair of substrates opposed to each other by this light shielding layer .

...

... 2 is formed by etching a transparent conductive film of an ITO provided on a transparent glass substrate 1. Subsequently, an insulating film having a prescribed thickness is formed by using a light shielding organic compound material, and a band-like light shielding layer 11 is provided by photoetching it. The light shielding layer is formed so as to be left in only a gap part of the band...

...executed by rubbing its surface in a prescribed direction. Thereafter, a transparent electrode 5, a light shielding layer 12 and the oriented film 3 are formed, the other oriented substrate 4 is opposed...

... crystal material 6 is enclosed in a gap held to a prescribed thickness by the light shielding layer .

25/3,K/17 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2000 Derwent Info Ltd. All rts. reserv.

010896600 \*\*Image available\*\*  
WPI Acc No: 1996-393551/199639  
XRPX Acc No: N96-331577

Liquid crystal display element for television, monitor or projector  
- has light absorbing member provided below drive circuit via  
transparent glass substrate

Patent Assignee: CITIZEN WATCH CO LTD (CITL )

Inventor: IMAI Y; YAMAUCHI M

Number of Countries: 018 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9625687	A1	19960822	WO 96JP347	A	19960216	199639 B
EP 757277	A1	19970205	EP 96902461	A	19960216	199711

			WO 96JP347	A	19960216	
JP 8524838	X	19970527	JP 96524838	A	19960216	199731
			WO 96JP347	A	19960216	
US 5745202	A	19980428	WO 96JP347	A	19960216	199824
			US 96727479	A	19961016	

Priority Applications (No Type Date): JP 9528535 A 19950217

Patent Details:

Patent No	Kind	Lan	Pg	Main	IPC	Filing	Notes
-----------	------	-----	----	------	-----	--------	-------

WO 9625687 A1 J 27 G02F-001/133

Designated States (National): JP US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

EP 57277 A1 E 16 G02F-001/133 Based on patent WO 9625687

Designated States (Regional): DE GB NL

JP 8524838 X G02F-001/133 Based on patent WO 9625687

US 5745202 A 14 G02F-001/1333 Based on patent WO 9625687

Liquid crystal display element for television, monitor or projector

...

...has light absorbing member provided below drive circuit via transparent glass substrate

...Abstract (Basic): The liquid crystal display element has at least two transparent glass substrates each having in turn a transparent electrode that are disposed such that the transparent...

...A first light shielding member has a light absorbing member for absorbing light is provided below the driving circuit via the transparent glass substrate...

International Patent Class (Main): G02F-001/133 ....

...G02F-001/1333

International Patent Class (Additional): G02F-001/1345

25/3,K/18 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2000 Derwent Info Ltd. All rts. reserv.

008184397

WPI Acc No: 1990-071398/199010

XRAM Acc No: C90-031503

XRPX Acc No: N90-054566

Colour filter for LCD - comprises transparent substrate, colour sepn.

use colour filter elements and light shielding layer

Patent Assignee: TOPPAN PRINTING CO LTD (TOPP )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2024604	A	19900126	JP 88175666	A	19880714	199010 B

Priority Applications (No Type Date): JP 88175666 A 19880714

Patent Details:

Patent No	Kind	Lan	Pg	Main	IPC	Filing	Notes
-----------	------	-----	----	------	-----	--------	-------

JP 2024604 A 4

Colour filter for LCD - ...

...comprises transparent substrate, colour sepn. use colour filter elements and light shielding layer

...Abstract (Basic): and concaves) on one surface, colour sepn use colour filter elements (4, 4', 4'') and a light shielding layer (3) which is pref a metal or metal oxide thin membrane, or a resin membrane

...

...An undercoat layer (13) made of a **transparent resin** is pref formed between the transparent substrate and the colour sepn use colour filter elements and an overcoat layer (14) made of a **transparent resin** is pref formed on the colour sepn use colour filter elements and the **light shielding layer** .

...

...USE/ADVANTAGE - Useful for full colour LCD . The colour filter has improved durability and when a metal or a metal oxide membrane...

...high permittivity concn is used, the reflection of the external light is uniform, and the **light shielding layer** is closer to black. When used for the LCD , the clarity of the obtd image is improved.

...Title Terms: LCD ;

...International Patent Class (Additional): G02F-001/13

File 2:INSPEC 1969-2000/Nov W2  
(c) 2000 Institution of Electrical Engineers  
File 6:NTIS 1964-2000/Dec W2  
Comp&dist 2000 NTIS, Intl Cpyrght All Right  
File 8:Ei Compendex(R) 1970-2000/Oct W4  
(c) 2000 Engineering Info. Inc.  
File 34:SciSearch(R) Cited Ref Sci 1990-2000/Nov W2  
(c) 2000 Inst for Sci Info  
File 35:Dissertation Abstracts Online 1861-2000/Nov  
(c) 2000 UMI  
File 65:Inside Conferences 1993-2000/Nov W2  
(c) 2000 BLDSC all rts. reserv.  
File 77:Conference Papers Index 1973-2000/Sep  
(c) 2000 Cambridge Sci Abs  
File 94:JICST-EPlus 1985-2000/Nov W1  
(c)2000 Japan Science and Tech Corp(JST)  
File 99:Wilson Appl. Sci & Tech Abs 1983-2000/Oct  
(c) 2000 The HW Wilson Co.  
File 108:Aerospace Database 1962-2000/Oct.  
(c) 2000 AIAA  
File 144:Pascal 1973-2000/Nov W2  
(c) 2000 INIST/CNRS  
File 238:Abs. in New Tech & Eng. 1981-2000/Nov  
(c) 2000 Reed-Elsevier (UK) Ltd.  
File 305:Analytical Abstracts 1980-2000/Nov W2  
(c) 2000 Royal Soc Chemistry  
File 315:ChemEng & Biotec Abs 1970-2000/Sep  
(c) 2000 DECHEMA

Set	Items	Description
S1	31122	LIQUID()CRYSTAL()DISPLAY? OR LCD
S2	28	LIGHT()SHIELD?() (MEMBER? OR LAYER? OR SUBSTANCE? OR TAPE?)
S3	8483	LIGHT?(3N) (COVER? OR HIDE OR SHIELD? OR HIDING OR BLOCK? OR MASK?)
S4	1454	PREVENT?(3N) (IRRADIAT? OR ILLUMINAT?)
S5	81	(S3 OR S4) (3N) (COMPLETELY OR TOTALLY OR FULLY)
S6	3294	TRANSPAREN?(3N) (GLASS OR RESIN)
S7	1345	SEMICONDUCTOR?() ELEMENT?
S8	2228245	ARRANG? OR PLACED OR DEPOSIT? OR PLACING OR FORMED
S9	22	OPPOSITE() SURFACE(3N) SUBSTRATE?
S10	139	SIMPLE(3N)MATRIX()METHOD?
S11	1	FACE() DOWN() METHOD?
S12	538	(LARGER OR BIGGER OR EXTEND?) (3N) POLARI?() PLATE? OR MOLDING() RESIN?
S13	2814	ARBITRARY(3N) PATTERN?
S14	8	S1 AND (S2 OR S5)
S15	7	RD S14 (unique items)
S16	0	S10 AND (S2 OR S5)
S17	0	S1 AND S12
S18	141	S1 AND (S3 OR S4)
S19	0	S18 AND S10
S20	0	S18 AND S7
S21	0	S18 AND S12
S22	0	S18 AND S13
S23	21	S18 AND S8
S24	13	S23 NOT (PY=>1996 OR PD=>960806)
S25	10	RD S24 (unique items)
S26	134	S18 NOT S15
S27	50	S26 NOT (PY=>1996 OR PD=>960806)
S28	44	RD S27 (unique items)

11/3,K/1 (Item 1 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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01963251 JICST ACCESSION NUMBER: 94A0057028 FILE SEGMENT: JICST-E  
**Development of Batch Processing MOCVD System for Commercial Production.**  
UEMATSU KUNIMASA (1)  
(1) Nippon Sanso K.K.  
Nippon Sanso Giho(Nippon Sanso Engineering Report), 1993, NO.12, PAGE.27-32  
, FIG.6, REF.1  
JOURNAL NUMBER: X0462AAZ ISSN NO: 0914-8280  
UNIVERSAL DECIMAL CLASSIFICATION: 539.23.07 621.315.5  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Original paper  
MEDIA TYPE: Printed Publication

...ABSTRACT: prevent particles to stick on the growing surface, a special  
method called horizontal, revolutionary\and **face -down method** was  
adopted, by which the wafer surface was held downward. The experimental  
result of epitaxial.

15/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

6321056 INSPEC Abstract Number: A1999-18-4270J-012, B1999-09-7260B-005

**Title: Black photopolymer and fabrication of black matrix**

Author(s): Fu Jinmei; Li Yong; Guo Jinliang; Gao Hongjin

Author Affiliation: Dept. of Chem., Tsinghua Univ., Beijing, China

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.3560 p.64-9

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1998 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1998)3560L:64:BPFB;1-X

Material Identity Number: C574-1998-257

U.S. Copyright Clearance Center Code: 0277-786X/98/\$10.00

Conference Title: Display Devices and Systems II

Conference Sponsor: SPIE; Chinese Opt. Soc.; China Opt. & optoelectron.

Manuf. Assoc

Conference Date: 16-17 Sept. 1998 Conference Location: Beijing, China

Language: English

Subfile: A B

Copyright 1999, IEE

...Abstract: good resolution. The negative charged carbon black is more suitable to be used as the **light shielding substance**. Several methods to shorten the exposure time were studied and discussed. Increasing the content of...

...Descriptors: **liquid crystal displays** ;

15/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

6239602 INSPEC Abstract Number: B1999-06-2560R-018

**Title: A low-temperature poly-Si TFT reflective XGA array for LCPC light valve**

Author(s): Kunigita, M.; Kato, N.; Musamo, K.; Yuki, M.

Author Affiliation: Asahi Glass Co. Ltd., Yokohama, Japan

Conference Title: 1998 SID International Symposium. Digest of Technical Papers. Vol. 29 p.463-6

Publisher: Soc. Inf. Display, Santa Anaheim, CA, USA

Publication Date: 1998 Country of Publication: USA xxiv+1269 pp.

Material Identity Number: XX-1998-02746

U.S. Copyright Clearance Center Code: 0098-0966X/98/2901-0463-\$1.00+.00

Conference Title: Proceedings of SID'98. International Symposium

Conference Date: 17-22 May 1998 Conference Location: Anaheim, CA, USA

Language: English

Subfile: B

Copyright 1999, IEE

...Abstract: organic film was used for a planarization layer of reflective electrodes as well as a **light shield layer** to the array. We applied the array to LCPC (Liquid Crystal/Polymer Composite) light valve

...Descriptors: **liquid crystal displays** ;

...Identifiers: **light shield layer** ;

15/3,K/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

5808154 INSPEC Abstract Number: B9802-7260-079

**Title: Fabrication of black matrix on TFT-array with high aperture ratio**



Author(s): Jeong Hyun Kim; Kyoung Nam Lirn; Young Jin Oh; Sang Ho Lee; Chang Wook Han; Yony Min Ha; Hoe Sup Soh

Author Affiliation: LCD R&D Center, LG Electron. Ltd., Kyungkido, South Korea

Conference Title: AM-LCD 96. Digest of Technical Papers. 1996 International Workshop on Active-Matrix Liquid-Crystal Displays in conjunction with IDW'96 p.153-6

Publisher: Japan Soc. Appl. Phys, Tokyo, Japan

Publication Date: 1996 Country of Publication: Japan viii+422 pp.

Material Identity Number: XX96-03670

Conference Title: Proceedings of International Workshop on Active-Matrix Liquid-Crystal Display in conjunction with IDW'96

Conference Date: 27-29 Nov. 1996 Conference Location: Kobe, Japan

Language: English

Subfile: B

Copyright 1998, IEE

Abstract: A 10.4-inch (VGA) TFT-LCD with the aperture ratio of 74% was fabricated by using the organic black matrix (BM) without another light shield layer. The various structures for the BM on TFT-array which has the same design rule...

...electrical characteristics. The novel planarized TFT-array structure had a high quality image of TFT-LCD without vertical crosstalk, light leakage and residual image.

...Descriptors: liquid crystal displays ;

...Identifiers: TFT-LCD ;

15/3,K/4 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

03178970 INSPEC Abstract Number: B88044768

Title: The characteristics of amorphous silicon TFT and its application in liquid crystal display

Author(s): Chikamura, T.; Hotta, S.; Nagata, S.

Author Affiliation: Central Res. Lab., Matsushita Electr. Ind. Co. Ltd., Osaka, Japan

Conference Title: Amorphous Silicon Semiconductors - Pure and Hydrogenated. Symposium p.421-30

Editor(s): Madan, A.; Thompson, M.; Adler, D.; Hamakawa, Y.

Publisher: Mater. Res. Soc, Pittsburgh, PA, USA

Publication Date: 1987 Country of Publication: USA xxiii+670 pp.

ISBN: 0 931837 62 6

Conference Sponsor: Mater. Res. Soc.

Conference Date: 21-25 April 1987 Conference Location: Anaheim, CA, USA

Language: English

Subfile: B

Title: The characteristics of amorphous silicon TFT and its application in liquid crystal display

Abstract: An amorphous silicon TFT particularly suited for the full color liquid crystal display driver has been developed and reported here. Various fundamental factors involved in the a-Si...

... degradation of display images due to the high intensity backlights was minimized by employing a light shielding layer and by making the thickness of a-Si layer 200 AA against the direct sunlight...

... more than 4000 hours at 80 degrees C were confirmed. The development of a color LCD TV driven by this TFT is also reported.

...Descriptors: liquid crystal displays ;

...Identifiers: liquid crystal display ;

15/3,K/5 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

02553755 INSPEC Abstract Number: B85064206

**Title: A TFT-addressed liquid-crystal color display**

Author(s): Sugata, M.; Okubo, Y.; Osada, Y.; Kasugayama, Y.

Author Affiliation: Canon Inc., Tokyo, Japan

Journal: Proceedings of the S.I.D vol.25, no.4 p.281-6

Publication Date: 1984 Country of Publication: USA

CODEN: SIDPAA ISSN: 0734-1768

U.S. Copyright Clearance Center Code: 0734-1768/84/2504-0281\$1.00

Conference Title: Third International Display Research Conference (Japan Display '83)

Conference Date: 3-5 Oct. 1983 Conference Location: Kobe, Japan

Language: English

Subfile: B

...Abstract: color display has been built using an amorphous-silicon thin-film transistor. Use of a **light shielding layer** in the structure makes possible the application of brighter back-illumination, and a color filter...

... by digital combination of the primary red, green, and blue colors. The design of the **liquid crystal display** device was established with the assistance of simulation techniques using SPICE 2 which was prepared...

...Descriptors: **liquid crystal displays** ;

...Identifiers: **light shielding layer** ;

15/3,K/6 (Item 1 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

(c) 2000 Engineering Info. Inc. All rts. reserv.

01657840 E.I. Monthly No: EIM8406-044233

**Title: EFFECT OF LIGHT SHIELD LAYER ON a-Si TFT LCD.**

Author: Ikeda, M.; Suzuki, K.; Aoki, T.; Ide, K.; Okada, Y.

Corporate Source: Toshiba Corp, Research & Development Cent, Kawasaki, Jpn

Conference Title: Japan Display '83, Proceedings of the 3rd International Display Research Conference.

Conference Location: Kobe, Jpn Conference Date: 19831003

E.I. Conference No.: 04158

Source: Publ by Soc for Information Display, Los Angeles, Calif, USA and Inst of Television Engineers of Japan, Tokyo, Jpn p 352-354

Publication Year: 1983

Language: English

**Title: EFFECT OF LIGHT SHIELD LAYER ON a-Si TFT LCD.**

Identifiers: **LIQUID CRYSTAL DISPLAYS** ; **AMORPHOUS SILICON THIN-FILM TRANSISTORS**; **LIGHT SHIELD LAYER** ; **PIXEL CIRCUIT**; **CONTRAST RATIO**

15/3,K/7 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-EPlus

(c)2000 Japan Science and Tech Corp(JST). All rts. reserv.

03496429 JICST ACCESSION NUMBER: 98A0249408 FILE SEGMENT: JICST-E

**A 2 inches in diagonal Reflective Light valve using Low temperature poly-silicon Thin Film Transistors.**

KUNIGITA MASAYA (1); KATO NAOKI (1); MASUMO KUNIO (1); OI YOSHIHARU (1); YUKI MASANORI (1)

(1) Asahigarasu Denshigikaiken

Eizo Joho Media Gakkai Gijutsu Hokoku, 1998, VOL.22,NO.5(IDY98 26-46),

PAGE.69-74, FIG.9, REF.10

JOURNAL NUMBER: S0209ABW ISSN NO: 1342-6893  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Original paper  
MEDIA TYPE: Printed Publication

...ABSTRACT: valve. An opaque organic film was used as a planarization layer and also as a light shield layer . High density screen image was obtained by 40.MU.m pitch pixels. (author abst.)

...DESCRIPTORS: liquid crystal display ;

?

25/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

4544036 INSPEC Abstract Number: B9401-7260-019

**Title: Effects of illumination on the display quality of VDT**

Author(s): Matsukawa, F.; Ouchida, H.; Nunoshita, M.

Author Affiliation: Mater. & Electron. Devices Lab., Mitsubishi Elec. Corp., Tokyo, Japan

Journal: Journal of the Illuminating Engineering Institute of Japan  
vol.77, no.6 p.304-9

Publication Date: June 1993 Country of Publication: Japan

CODEN: SHGSAR ISSN: 0019-2341

Language: Japanese

Subfile: B

Abstract: Legibility of VDT using LCD was evaluated in comparison with VDT using CRT. The display luminance, contrast and chromaticity of the color LCD and CRT were examined under different illumination. The variation of display contrast was dependent on the diffusive reflectance of the **light shield mask formed** in the colour filter of the LCD panel. The variation was expected to be improved using a mask with lower diffusive reflectance.

...Descriptors: liquid crystal displays ;

...Identifiers: LCD ; ...

...light shield mask ;

25/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

4418224 INSPEC Abstract Number: A9313-4280K-011, B9307-4150D-004

**Title: Study of a-Si:H/  $\mu$  c-Si:H heterojunction as photosensor for large screen projection display**

Author(s): Weiqiang Han; Gaorong Han; Jianmin Qiao; Piyi Du; Danmei Zhao; Zishang Ding

Author Affiliation: Dept. of Mater. Sci. & Eng., Zhejiang Univ., Hangzhou, China

Conference Title: Amorphous Silicon Technology - 1992, Symposium p. 1099-104

Editor(s): Thompson, M.J.; Hamakawa, Y.; LeComber, P.G.; Madan, A.; Schiff, E.A.

Publisher: Mater. Res. Soc, Pittsburgh, PA, USA

Publication Date: 1992 Country of Publication: USA xxv+1198 pp.

Conference Sponsor: EPRI; Electrorava Corp.; Fuji Electr. Co.; Sanyo; Siemens; Xerox; et al

Conference Date: 27 April-1 May 1992 Conference Location: San Francisco, CA, USA

Language: English

Subfile: A B

...Abstract: for large screen projection display. The a-Si:H photoconductor and  $\mu$  c-Si:H **light blocking** layer were prepared by a modified glow discharge CVD method. The optoelectric and structure properties of the  $\mu$  c-Si:H films **deposited** at different **deposition** conditions have been studied. The a-Si:H film and the continuously **deposited**  $\mu$  c-Si:H film possibly form an a-Si:H/  $\mu$  c-Si:H...

...Descriptors: liquid crystal displays ;

...Identifiers: light blocking layer

25/3,K/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

03380299 INSPEC Abstract Number: B89037743

**Title: An a-Si TFT with a new light - shield structure and its application to active-matrix liquid crystal displays**

Author(s): Akiyama, M.; Toeda, H.; Ohtaguro, H.; Suzuki, H.; Ito, H.

Author Affiliation: Toshiba Corp., Kawasaki, Japan

Conference Title: International Electron Devices Meeting. Technical Digest (IEEE Cat. No.88CH2528-8) p.268-71

Publisher: IEEE, New York, NY, USA

Publication Date: 1988 Country of Publication: USA 902 pp.

U.S. Copyright Clearance Center Code: CH2528-8/88/0000-0268\$01.00

Conference Sponsor: IEEE

Conference Date: 11-14 Dec. 1988 Conference Location: San Francisco, CA, USA

Language: English

Subfile: B

**Title: An a-Si TFT with a new light - shield structure and its application to active-matrix liquid crystal displays**

...Abstract: in a gate-bottomed inverted-staggered a-Si TFT (thin film transistor) under gate side illumination, despite the prevention of light transmission into the channel region of the a-Si layer by the gate...  
... Si layer, which protrudes from the gate electrode edge near the drain junction. A novel light -shield structure in which the intrinsic island is placed inside the gate electrode has been developed to reduce the light-induced leakage current. Using...

... A in the negative-gate-voltage region. It has been confirmed that an active-matrix liquid -crystal display using these TFTs has sufficient display performance stability up to 10/sup 5/-lx gateside...

...Identifiers: light -shield structure...

...active-matrix liquid crystal displays ;

25/3,K/4 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

03178970 INSPEC Abstract Number: B88044768

**Title: The characteristics of amorphous silicon TFT and its application in liquid crystal display**

Author(s): Chikamura, T.; Hotta, S.; Nagata, S.

Author Affiliation: Central Res. Lab., Matsushita Electr. Ind. Co. Ltd., Osaka, Japan

Conference Title: Amorphous Silicon Semiconductors - Pure and Hydrogenated. Symposium p.421-30

Editor(s): Madan, A.; Thompson, M.; Adler, D.; Hamakawa, Y.

Publisher: Mater. Res. Soc, Pittsburgh, PA, USA

Publication Date: 1987 Country of Publication: USA xxiii+670 pp.

ISBN: 0 931837 62 6

Conference Sponsor: Mater. Res. Soc.

Conference Date: 21-25 April 1987 Conference Location: Anaheim, CA, USA

Language: English

Subfile: B

**Title: The characteristics of amorphous silicon TFT and its application in liquid crystal display**

Abstract: An amorphous silicon TFT particularly suited for the full color liquid crystal display driver has been developed and reported here. Various fundamental factors involved in the a-Si...

...purpose wherein the interface states between two layers was successfully lowered by employing the successive deposition procedures of SiN/sub x/ gate insulator on the a-Si layer. Proper ohmic contacts...

... degradation of display images due to the high intensity backlights was minimized by employing a **light shielding** layer and by making the thickness of a-Si layer 200 AA against the direct...

... more than 4000 hours at 80 degrees C were confirmed. The development of a color LCD TV driven by this TFT is also reported.

...Descriptors: **liquid crystal displays** ;

...Identifiers: **liquid crystal display** ;

25/3,K/5 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

02553755 INSPEC Abstract Number: B85064206

Title: **A TFT-addressed liquid-crystal color display**

Author(s): Sugata, M.; Okubo, Y.; Osada, Y.; Kasugayama, Y.

Author Affiliation: Canon Inc., Tokyo, Japan

Journal: Proceedings of the S.I.D vol.25, no.4 p.281-6

Publication Date: 1984 Country of Publication: USA

CODEN: SIDPAA ISSN: 0734-1768

U.S. Copyright Clearance Center Code: 0734-1768/84/2504-0281\$1.00

Conference Title: Third International Display Research Conference (Japan Display '83)

Conference Date: 3-5 Oct. 1983 Conference Location: Kobe, Japan

Language: English

Subfile: B

...Abstract: color display has been built using an amorphous-silicon thin-film transistor. Use of a **light shielding** layer in the structure makes possible the application of brighter back-illumination, and a color filter composed of organic pigments **formed** by vacuum evaporation gives longer display lifetime. A 30\*34.8 mm panel with 50...

... by digital combination of the primary red, green, and blue colors. The design of the **liquid crystal display** device was established with the assistance of simulation techniques using SPICE 2 which was prepared...

...Descriptors: **liquid crystal displays** ;

...Identifiers: **light shielding layer**

25/3,K/6 (Item 1 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

(c) 2000 Engineering Info. Inc. All rts. reserv.

04360044 E.I. No: EIP96033105145

Title: **Study on the nc-Si:H/a-Si:H liquid crystal light valve**

Author: Han, Weiqiang; Han, Gaorong; Ding, Zishang

Corporate Source: Zhejiang Univ, Hangzhou, China

Source: Yuanzineng Kexue Jishu/Atomic Energy Science and Technology v 29 n 2 Mar 1995. p 289-291

Publication Year: 1995

CODEN: YKJIEZ ISSN: 1000-6931

Language: Chinese

Abstract: The effect of a **light blocking** layer in the liquid crystal light valve (LCLV) was analyzed here, and an idea of using the nc-Si:H film as the **light blocking** layer of LCLV was first reported and realized for the large-screen projection display. The a-Si:H photoconductor layer and nc-Si:H **light blocking** layer were continuously prepared by the glow discharge PCVD method, and the structure as well as the photoelectric characteristics of the nc-Si:H film under different **deposition** conditions were investigated. The a-Si:H film combined with the nc-Si:H film **deposited** sequentially forms a heterojunction a-Si:H/nc-Si:H which improves the performances of...

Descriptors: Nanostructured materials; Amorphous materials; Silicon

sensors; Liquid crystal displays

25/3,K/7 (Item 2 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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04255507 E.I. No: EIP95092862002

**Title: Grating-type soft-focus filter for improving picture quality of liquid crystal displays**  
Author: Fujisawa, Katsuya; Uetsuki, Masao  
Corporate Source: Kuraray Co, Ltd, Kurashiki, Jpn  
Source: Japanese Journal of Applied Physics, Part 1: Regular Papers & Short Notes & Review Papers v 34 n 7A July 1995. p 3583-3588  
Publication Year: 1995  
CODEN: JAPNDE  
Language: English

**Title: Grating-type soft-focus filter for improving picture quality of liquid crystal displays**  
...Abstract: focus filter was fabricated from a polymer film to transform the discontinuous picture of a liquid crystal display (LCD) into a continuous one. The soft-focus filter having a two-dimensional grating pattern with a sinusoidal cross section was photochemically formed on the film by proximity exposure through a photo-mask to ultraviolet light. When the LCD surface was covered with the soft-focus filter, the output light beam from the LCD was transformed into mainly nine beams as a result of (0, 0)- to ( plus or...  
...with nearly equivalent intensities. Thereby, the picture discontinuity caused by the black matrix of the LCD was removed at a small expense of picture contrast. (Author abstract) 12 Refs.  
Descriptors: Optical filters; Liquid crystal displays ; Image quality; Diffraction gratings; Plastic films; Photochemical reactions; Masks; Ultraviolet radiation; Focusing

25/3,K/8 (Item 1 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
(c)2000 Japan Science and Tech Corp(JST). All rts. reserv.

02608789 JICST ACCESSION NUMBER: 95A0805754 FILE SEGMENT: JICST-E  
**The Process for the Formation of the Color Filter for the Liquid Crystal Display on the Application of a Colored Photosensitive Transfer Material.**  
SHINOZAKI FUMIAKI (1); IWASAKI MASAYUKI (1); SATO MORIMASA (1)  
(1) Fuji Photo Film Co., Ltd.  
Nippon Insatsu Gakkaishi(Bulletin of the Japanese Society of Printing Science and Technology), 1995, VOL.32,NO.3, PAGE.158-165, FIG.14, TBL.4, REF.8  
JOURNAL NUMBER: G0233ABD ISSN NO: 0914-3319  
UNIVERSAL DECIMAL CLASSIFICATION: 681.327.2  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Original paper  
MEDIA TYPE: Printed Publication

**The Process for the Formation of the Color Filter for the Liquid Crystal Display on the Application of a Colored Photosensitive Transfer Material.**

...ABSTRACT: a inter-layer having a low oxygen permeability; and a colored light sensitive resin layer arranged in this order has been prepared. A process for the formation of an image which...

...support, and so on. In addition, a self-alignment process for the formation of a light shielding pattern, i.e. black matrix, was also discussed. These processes can simplify the formation of the high

quality color filter for the liquid crystal display . (author abst.)

...DESCRIPTORS: liquid crystal display ;

25/3,K/9 (Item 2 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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02269961 JICST ACCESSION NUMBER: 94A0959904 FILE SEGMENT: JICST-E  
**Special issue : Particle deposition. Measurement technique of surface particulate contamination of large glass substrates for liquid crystal.**  
ORAI IZUO (1); KUMAZAWA YUTAKA (1)  
(1) Hitachi Electron. Engineering Co., Ltd.  
Kurin Tekunoroji (Clean Technology), 1994, VOL.4, NO.11, PAGE.45-50, FIG.16, TBL.1, REF.9

JOURNAL NUMBER: L1138AAI ISSN NO: 0917-1819 CODEN: KTEKE  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

**Special issue : Particle deposition. Measurement technique of surface particulate contamination of large glass substrates for liquid crystal.**  
...ABSTRACT: such as black spots, pinholes, projections etc. Application examples of the inspection equipment in an LCD manufacturing process are shown and the evaluation results are reported.  
DESCRIPTORS: liquid crystal display ; ...  
...light shielding ;

25/3,K/10 (Item 3 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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00790647 JICST ACCESSION NUMBER: 89A0596559 FILE SEGMENT: JICST-E  
**Characteristics of very high contrast(VHC) liquid crystal display for automotive application.**  
MATSUMOTO TETSURO (1); NAKAGAWA YUTAKA (1); MATSUHIRO KENJI (1)  
(1) Asahigarasu Denshishohinkaise  
Asahi Garasu Kenkyu Hokoku (Reports of the Research Laboratory, Asahi Glass Co., Ltd), 1989, VOL.39, NO.1, PAGE.89-98, FIG.12, REF.3  
JOURNAL NUMBER: F0002AAX ISSN NO: 0004-4210 CODEN: AGKHA  
UNIVERSAL DECIMAL CLASSIFICATION: 629.33.04/.06  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

**Characteristics of very high contrast(VHC) liquid crystal display for automotive application.**  
ABSTRACT: Liquid crystal display has been widely applied to automotive instruments. The negative mode twisted nematic cell has been ...

...bleed-though, reduces legibility of the display. To solve this problem, a very high contrast liquid crystal display (VHC) was developed. The VHC is based on 3 technologies. (1) Light shielding black mask printed inside the cell. (2) The positive mode twisted nematic configuration. (3) An inversed driving...

...optimization of optical anisotropy of liquid crystal (.DELTA.n) and cell gap (d), and accurate arrangement of polarizers. The VHC has some additional advantages, such as little angular dependence of color...  
...DESCRIPTORS: liquid crystal display



28/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

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5918969 INSPEC Abstract Number: B9806-7260-144, C9806-5540-022

**Title: A 10.4 inch diagonal active-matrix LCD addressed by top-gate a-Si TFT eliminating light-shield**

Author(s): Takeuchi, S.; Ukawa, Y.; Hashimoto, K.; Sunata, T.; Aoki, S.

Author Affiliation: Hosiden Corp., Kobe, Japan

Conference Title: Proceedings of Fifteenth International Display Research Conference. Asia Display '95 p.957-8

Publisher: Inst. Telev. Eng. Japan & SID, Tokyo, Japan & Santa Ana, CA, USA

Publication Date: 1995 Country of Publication: USA xxvi+981 pp.

Material Identity Number: XX95-01936

Conference Title: Proceedings of 15th International Display Research Conference

Conference Sponsor: Inst. Telev. Eng. Japan; SID

Conference Date: 16-18 Oct. 1995 Conference Location: Hamamatsu, Japan

Language: English

Subfile: B C

Copyright 1998, IEE

**Title: A 10.4 inch diagonal active-matrix LCD addressed by top-gate a-Si TFT eliminating light-shield**

Abstract: It has been shown that TFT panel without light shield can be used for PCs by decreasing a-Si thickness less than 20nm because TFT...

...Descriptors: liquid crystal displays ;

Identifiers: active-matrix LCD ; ...

...light -shield ;

28/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

5911592 INSPEC Abstract Number: B9806-7260-085

**Title: Analysis of the photo-leakage-current effect on display performance for a-Si TFT-LCDs**

Author(s): Hanazawa, Y.; Inada, K.; Kitazawa, T.; Dohjo, M.; Hirota, S.; Higuchi, T.

Author Affiliation: Display Device Eng. Lab., Toshiba Corp., Yokohama, Japan

Conference Title: Proceedings of Fifteenth International Display Research Conference. Asia Display '95 p.703-6

Publisher: Inst. Telev. Eng. Japan & SID, Tokyo, Japan & Santa Ana, CA, USA

Publication Date: 1995 Country of Publication: USA xxvi+981 pp.

Material Identity Number: XX95-01936

Conference Title: Proceedings of 15th International Display Research Conference

Conference Sponsor: Inst. Telev. Eng. Japan; SID

Conference Date: 16-18 Oct. 1995 Conference Location: Hamamatsu, Japan

Language: English

Subfile: B

Copyright 1998, IEE

Abstract: We have developed a novel light-shield pixel structure having an advanced light-shield TFT to reduce the photo-leakage-current completely. By using this structure, we developed a 26 cm-diagonal high-resolution a-Si TFT-LCD with 1024(\*3)\*768 pixels. In this structure, the sum of the storage capacitance and...

...Descriptors: liquid crystal displays ;

...Identifiers: a-Si TFT-LCD ; ...

...light -shield pixel structure...

...liquid crystal display ;

28/3,K/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

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5185152 INSPEC Abstract Number: B9603-4150D-014

**Title: Study on nc-Si:H film as light blocking layer for liquid crystal light valve**

Author(s): Han Weiqiang; Han Gaorong; Ding Zishang

Author Affiliation: Dept. of Mater. Sci. & Eng., Zhejiang Univ., Hangzhou, China

Journal: Journal of Zhejiang University vol.29, no.6 p.724-9

Publisher: Zhejiang Univ,

Publication Date: Nov. 1995 Country of Publication: China

CODEN: CHHPDK ISSN: 0253-9861

SICI: 0253-9861(199511)29:6L:724:SFLB;1-0

Material Identity Number: C797-96002

Language: Chinese

Subfile: B

Copyright 1996, IEE

**Title: Study on nc-Si:H film as light blocking layer for liquid crystal light valve**

...Abstract: crystal as the modulator has been presented for large screen projection display. nc-Si:H light blocking layer has been inserted in order to increase the device gain. The a-Si:H photoconductor and nc-Si:H light blocking layer were prepared by a modified glow discharge CVD method. The optoelectronic and structure properties...

...LCLV using a-Si:H/nc-Si:H heterojunction as photosensor and nc-Si:H light blocking layer insertion had improved device performance.

...Descriptors: liquid crystal displays ;

Identifiers: light blocking layer...

28/3,K/4 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

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5108557 INSPEC Abstract Number: A9524-8770J-006, B9512-7520E-016

**Title: Use of liquid crystal display technology in ocular prosthesis**

Author(s): Seekola, D.L.; Leuschner, F.W.

Author Affiliation: Dept. of Electr. & Electron. Eng., Pretoria Univ., South Africa

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.2408 p.100-6

Publication Date: 1995 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

U.S. Copyright Clearance Center Code: 0 8194 1755 6/95/\$6.00

Conference Title: Liquid Crystal Materials, Devices, and Displays

Conference Sponsor: SPIE; Soc. Imaging Sci. & Technol

Conference Date: 9-10 Feb. 1995 Conference Location: San Jose, CA, USA

Language: English

Subfile: A B

Copyright 1995, IEE

**Title: Use of liquid crystal display technology in ocular prosthesis**

Abstract: Use of liquid crystal display technology for ocular prosthesis was recently proposed (Leuschner, Proc. SPIE vol. 1644, p. 320, 1993...

... the principle of operation of the prosthetic device, in the off state

the display should **block** **light** and appear black. This is easily achieved with TN cells. For the dispersed technology, a...

... as photostability, battery life, alternate modes of operation and the use of other types of **liquid crystal display** technology are also discussed.

Identifiers: **liquid crystal display** technology...

28/3,K/5 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

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5034073 INSPEC Abstract Number: B9510-7260-015

**Title: Realization of a high-aperture ratio in a novel 2.8-inch diagonal VGA TFD-R projection display**

Author(s): van Mourik, J.G.R.; Hartman, R.A.; van der Kloet, R.; Leenhouts, F.

Author Affiliation: Flat Panel Display Co. B.V., Eindhoven, Netherlands

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.2407 p.96-103

Publication Date: 1995 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

U.S. Copyright Clearance Center Code: 0 8194 1754 8/95/\$6.00

Conference Title: Projection Displays

Conference Sponsor: SPIE; Soc. Imaging Sci. & Technol

Conference Date: 8-10 Feb. 1995 Conference Location: San Jose, CA, USA

Language: English

Subfile: B

Copyright 1995, IEE

Abstract: Active matrix **liquid crystal displays** (AMLCDs) used for projection applications are commonly manufactured in thin film transistor (TFT) technology using...

... row electrodes, a storage capacitor and a black mask. This black mask also has to **hide** **light** leakage due to disclination lines caused by lateral electrical fields. In this paper it will...

...have been developed exhibiting a high aperture ratio. The high luminance capability of TFD-R LCD based projectors was demonstrated by comparing a projector provided with 2.8" TFT LCDs and...

...Descriptors: **liquid crystal displays** ;

...Identifiers: active matrix **liquid crystal displays** ; ...

...LCD ;

28/3,K/6 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

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4710276 INSPEC Abstract Number: B9408-7260-023, C9408-5540-007

**Title: LCD rear projection. The emerging technology for the large size TV consumer market**

Author(s): Dupont, A.; Dibon, E.M.; Haas, G.; Hackett, A.

Author Affiliation: Consumer Electronics R&D, Thomson-CSF, Orsay, France

Journal: Revue Technique Thomson-CSF vol.26, no.1 p.203-38

Publication Date: March 1994 Country of Publication: France

CODEN: RTTCBG ISSN: 0035-4279

Language: English

Subfile: B C

**Title: LCD rear projection. The emerging technology for the large size TV consumer market**

Abstract: LCD rear projection is one of the few display technologies which could reach before the end...

... the large size TV consumer market. In this paper, we will review the basics of LCD projection optical systems, describe the optical key component functions and present some characteristics of the prototype we have developed. Next, the required LCD light valve improvements are covered in terms of electrooptical properties. The digital signal processing requirements are then be presented. As a conclusion, the key challenges necessary to bring LCD rear projection onto the consumer market are pointed out.

...Descriptors: liquid crystal displays ;

Identifiers: LCD rear projection...

28/3,K/7 (Item 7 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

4544036 INSPEC Abstract Number: B9401-7260-019

Title: Effects of illumination on the display quality of VDT

Author(s): Matsukawa, F.; Ouchida, H.; Nunoshita, M.

Author Affiliation: Mater. & Electron. Devices Lab., Mitsubishi Elec. Corp., Tokyo, Japan

Journal: Journal of the Illuminating Engineering Institute of Japan  
vol.77, no.6 p.304-9

Publication Date: June 1993 Country of Publication: Japan

CODEN: SHGSAR ISSN: 0019-2341

Language: Japanese

Subfile: B

Abstract: Legibility of VDT using LCD was evaluated in comparison with VDT using CRT. The display luminance, contrast and chromaticity of the color LCD and CRT were examined under different illumination. The variation of display contrast was dependent on the diffusive reflectance of the light shield mask formed in the colour filter of the LCD panel. The variation was expected to be improved using a mask with lower diffusive reflectance.

...Descriptors: liquid crystal displays ;

...Identifiers: LCD ; ...

...light shield mask ;

28/3,K/8 (Item 8 from file: 2)

DIALOG(R)File 2:INSPEC

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4418224 INSPEC Abstract Number: A9313-4280K-011, B9307-4150D-004

Title: Study of a-Si:H/  $\mu$  c-Si:H heterojunction as photosensor for large screen projection display

Author(s): Weiqiang Han; Gaorong Han; Jianmin Qiao; Piyi Du; Danmei Zhao; Zishang Ding

Author Affiliation: Dept. of Mater. Sci. & Eng., Zhejiang Univ., Hangzhou, China

Conference Title: Amorphous Silicon Technology - 1992, Symposium p. 1099-104

Editor(s): Thompson, M.J.; Hamakawa, Y.; LeComber, P.G.; Madan, A.; Schiff, E.A.

Publisher: Mater. Res. Soc, Pittsburgh, PA, USA

Publication Date: 1992 Country of Publication: USA xxv+1198 pp.

Conference Sponsor: EPRI; Electrorava Corp.; Fuji Electr. Co.; Sanyo; Siemens; Xerox; et al

Conference Date: 27 April-1 May 1992 Conference Location: San Francisco, CA, USA

Language: English

Subfile: A B

...Abstract: for large screen projection display. The a-Si:H photoconductor and mu c-Si:H light blocking layer were prepared by a modified glow discharge CVD method. The optoelectric and structure properties...

...Descriptors: liquid crystal displays ;

...Identifiers: light blocking layer

28/3,K/9 (Item 9 from file: 2)

DIALOG(R) File 2:INSPEC

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04397564 INSPEC Abstract Number: B9306-7260-014

Title: Two-mask a-Si:H TFT matrix for active liquid crystal displays

Author(s): Le Contellec, M.; Morin, F.

Author Affiliation: Dept. OCM/TEP CNET-LANNION B, Lannion, France

Journal: Optoelectronics - Devices and Technologies vol.7, no.2 p.

287-99

Publication Date: Dec. 1992 Country of Publication: Japan

CODEN: ODTEEG ISSN: 0912-5434

Language: English

Subfile: B

Title: Two-mask a-Si:H TFT matrix for active liquid crystal displays

...Abstract: similar to those of TFT prepared by a conventional process. As the TFT is not light -shielded , an amorphous silicon layer as thin as 150 AA can be used to decrease the...

...Descriptors: liquid crystal displays ;

...Identifiers: active liquid crystal displays ;

28/3,K/10 (Item 10 from file: 2)

DIALOG(R) File 2:INSPEC

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03380299 INSPEC Abstract Number: B89037743

Title: An a-Si TFT with a new light - shield structure and its application to active-matrix liquid crystal displays

Author(s): Akiyama, M.; Toeda, H.; Ohtaguro, H.; Suzuki, H.; Ito, H.

Author Affiliation: Toshiba Corp., Kawasaki, Japan

Conference Title: International Electron Devices Meeting. Technical Digest (IEEE Cat. No.88CH2528-8) p.268-71

Publisher: IEEE, New York, NY, USA

Publication Date: 1988 Country of Publication: USA 902 pp.

U.S. Copyright Clearance Center Code: CH2528-8/88/0000-0268\$01.00

Conference Sponsor: IEEE

Conference Date: 11-14 Dec. 1988 Conference Location: San Francisco, CA, USA

Language: English

Subfile: B

Title: An a-Si TFT with a new light - shield structure and its application to active-matrix liquid crystal displays

...Abstract: in a gate-bottomed inverted-staggered a-Si TFT (thin film transistor) under gate side illumination , despite the prevention of light transmission into the channel region of the a-Si layer by the gate... Si layer, which protrudes from the gate electrode edge near the drain junction. A novel light -shield structure in which the intrinsic island is placed inside the gate electrode has been developed...

... A in the negative-gate-voltage region. It has been confirmed that an active-matrix liquid -crystal display using these TFTs has sufficient display performance stability up to 10/sup 5/-lx gateside...

...Identifiers: light -shield structure...

...active-matrix liquid crystal displays ;

28/3,K/11 (Item 11 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

03352841 INSPEC Abstract Number: B89036281

**Title: Very high contrast liquid crystal display (VHC) for automotive instruments**

Author(s): Nakagawa, Y.; Matsumoto, T.; Matsushita, S.; Uchida, Y.; Araki, H.

Author Affiliation: Asahi Glass Electron. Products R&D Center Co. Ltd., Yokohama, Japan

Journal: Proceedings of the SPIE - The International Society for Optical Engineering vol.958 p.68-72

Publication Date: 1988 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

Conference Title: Automotive Displays and Industrial Illuminations

Conference Sponsor: SPIE; ESD-Eng. Soc

Conference Date: 27-30 June 1988 Conference Location: Dearborn, MI, USA

Language: English

Subfile: B

**Title: Very high contrast liquid crystal display (VHC) for automotive instruments**

Abstract: The VHC is based on three technologies; light shielding black mask, the positive mode twisted nematic configuration and an inversed driving method. Maximum contrast ratio exceeds...

...Descriptors: liquid crystal displays

...Identifiers: light shielding black mask ;

28/3,K/12 (Item 12 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2000 Institution of Electrical Engineers. All rts. reserv.

02710595 INSPEC Abstract Number: B86050167

**Title: Large LCD panel addressed by 320\*320 TFT array**

Author(s): Richard, J.; Bonnel, M.; Vinouze, B.; Favennec, J.L.; Weisse, P.; Bessonnat, Y.; Gerard, G.; Salaun, S.; Le Contellec, M.; Morin, F.

Author Affiliation: CNET, Lannion, France

Journal: Proceedings of the S.I.D vol.26, no.3 p.209-12

Publication Date: 1985 Country of Publication: USA

CODEN: SIDPAA ISSN: 0734-1768

U.S. Copyright Clearance Center Code: 0734-1768/85/2603-0209\$1.00

Language: English

Subfile: B

**Title: Large LCD panel addressed by 320\*320 TFT array**

Abstract: A large LCD panel (80\*80 mm/sup 2/) consisting of 320\*320 dots, with every dot addressed...

... H TFT, was developed. A new shortened two-step photolithography process was developed. Moreover, neither light shield nor storage capacitance are required, and the panel can display halftone TV pictures.

...Descriptors: liquid crystal displays ;

Identifiers: liquid crystal display ; ...

...LCD panel

28/3,K/13 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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1862904 NTIS Accession Number: PB95-868717

Liquid Crystal Displays: Optical Systems and Elements. (Latest citations from the U.S. Patent Bibliographic File with Exemplary Claims) (Published Search)

NERAC, Inc., Tolland, CT.

Corp. Source Codes: 103588000

Sponsor: National Technical Information Service, Springfield, VA.

Jan 95 198 citations minimum

Languages: English Document Type: Bibliography; Patent

Journal Announcement: GRAI9509

Updated with each order. Supersedes PB94-883998. Sponsored in part by National Technical Information Service, Springfield, VA.

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NTIS Prices: PC N01/MF N01

Liquid Crystal Displays: Optical Systems and Elements. (Latest citations from the U.S. Patent Bibliographic File with Exemplary...

The bibliography contains citations of selected patents concerning the optical components of liquid crystal displays (LCDs). Citations cover use of prisms to transmit light to illuminate the display, polarizers, birefringent layers, light sources, and transparent substrates. Color filters, reflectors, microlens arrays, light shields, and orientation films are included. (Contains a minimum of 198 citations and includes a subject...

Identifiers: Liquid crystal display devices; \*LCD devices; Published Searches; NTISPSPTO; NTISNERACD

28/3,K/14 (Item 2 from file: 6)

DIALOG(R)File 6:NTIS

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1342050 NTIS Accession Number: TIB/B87-81154

Automatisch abdunkelnde Schweisser-Schutzvorrichtungen auf Fluessigkristall-Basis. Schlussbericht. (Automatically darkened welding protection devices based on liquid crystal. Final report)

Hampel, B. ; Kayed, J. ; Langenbeck, P. ; Pauls, L. ; Pauls, W.

Bundesministerium fuer Forschung und Technologie, Bonn (Germany, F.R.). Crystop Display G.m.b.H. - Gesellschaft fuer Anzeigesysteme, Karlsruhe (Germany, F.R.).

Corp. Source Codes: 057110000

Report No.: BMFT-FB-HA--86-033

Dec 86 66p

Languages: German

Journal Announcement: GRAI8804

In German, With 29 refs., 1 tab., 10 figs.

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC E09

Welding protection devices using liquid crystal displays on complementary and 2-frequency principle were developed and produced. This development was compared to...

Descriptors: Human factors engineering; \*Welders (personel); Protective masks ; Lightning protection; Goggles; Welding; Darkening; Liquid crystals; Display devices

28/3,K/15 (Item 3 from file: 6)

DIALOG(R)File 6:NTIS

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0631194 NTIS Accession Number: AD-A039 118/5/XAB

**Development of a Color Symbology AC Liquid Crystal Light Valve**

(Final technical rept. 1 Nov 74-12 Jun 76)

Jacobson, A. D. ; Bleha, W. P.

Hughes Research Labs Malibu Calif

Corp. Source Codes: 172600

Apr 77 112p

Journal Announcement: GRAI7715

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A06/MF A01

... is described. The light valve consists of a sandwich structure of a thin film photoconductor, **light blocking** layer, broad visible spectrum dielectric mirror and liquid crystal sandwiched between two glass electrodes with...

Identifiers: Projection displays; Dielectric mirrors; **Liquid crystal display** systems; Cadmium sulfides; NTISDODXA

28/3,K/16 (Item 1 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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04360044 E.I. No: EIP96033105145

**Title: Study on the nc-Si:H/a-Si:H liquid crystal light valve**

Author: Han, Weiqiang; Han, Gaorong; Ding, Zishang

Corporate Source: Zhejiang Univ, Hangzhou, China

Source: Yuanzineng Kexue Jishu/Atomic Energy Science and Technology v 29 n 2 Mar 1995. p 289-291

Publication Year: 1995

CODEN: YKJIEZ ISSN: 1000-6931

Language: Chinese

Abstract: The effect of a **light blocking** layer in the liquid crystal light valve (LCLV) was analyzed here, and an idea of using the nc-Si:H film as the **light blocking** layer of LCLV was first reported and realized for the large-screen projection display. The a-Si:H photoconductor layer and nc-Si:H **light blocking** layer were continuously prepared by the glow discharge PCVD method, and the structure as well...

Descriptors: Nanostructured materials; Amorphous materials; Silicon sensors; **Liquid crystal displays**

28/3,K/17 (Item 2 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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04255507 E.I. No: EIP95092862002

**Title: Grating-type soft-focus filter for improving picture quality of liquid crystal displays**

Author: Fujisawa, Katsuya; Uetsuki, Masao

Corporate Source: Kuraray Co, Ltd, Kurashiki, Jpn

Source: Japanese Journal of Applied Physics, Part 1: Regular Papers & Short Notes & Review Papers v 34 n 7A July 1995. p 3583-3588

Publication Year: 1995

CODEN: JAPNDE

Language: English

**Title: Grating-type soft-focus filter for improving picture quality of liquid crystal displays**

...Abstract: focus filter was fabricated from a polymer film to transform the discontinuous picture of a **liquid crystal display** (LCD) into a



continuous one. The soft-focus filter having a two-dimensional grating pattern with...

...sinusoidal cross section was photochemically formed on the film by proximity exposure through a photo-mask to ultraviolet light . When the LCD surface was covered with the soft-focus filter, the output light beam from the LCD was transformed into mainly nine beams as a result of (0, 0)- to ( plus or...

...with nearly equivalent intensities. Thereby, the picture discontinuity caused by the black matrix of the LCD was removed at a small expense of picture contrast. (Author abstract) 12 Refs.

Descriptors: Optical filters; Liquid crystal displays ; Image quality; Diffraction gratings; Plastic films; Photochemical reactions; Masks; Ultraviolet radiation; Focusing

28/3,K/18 (Item 3 from file: 8)   
DIALOG(R)File 8:Ei Compendex(R)   
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04204741 E.I. No: EIP95042668197

Title: Realization of a high-aperture ratio in a novel 2.8-inch diagonal VGA thin film diode (TFD)-R projection display

Author: Mourik, J.G.; Hartman, R.A.; Kloet, R.; Leenhouts, F.

Corporate Source: Flat Panel Display Co. BV, Eindhoven, Neth

Conference Title: Projection Displays

Conference Location: San Jose, CA, USA Conference Date: 19950208-19950210

E.I. Conference No.: 22223

Source: Proceedings of SPIE - The International Society for Optical Engineering v 2407 1995. Society of Photo-Optical Instrumentation Engineers, Bellingham, WA, USA. p 96-103

Publication Year: 1995

CODEN: PSISDG ISSN: 0277-786X ISBN: 0-8194-1754-8

Language: English

Abstract: Active Matrix Liquid Crystal Displays used for projection applications are commonly manufactured in Thin Film Transistor (TFT) technology using amorphous...

...row electrodes, a storage capacitor and a black mask. This black mask also has to hide light leakage due to disclination lines caused by lateral electrical fields. In this paper it will...

...have been developed exhibiting a high aperture ratio. The high luminance capability of TFD-R LCD based projectors was demonstrated by comparing a projector provided with 2.8' TFT LCDs and...

Descriptors: Liquid crystal displays ; Projection systems; Thin film devices; Display devices; Semiconductor diodes; Optical projectors

Identifiers: Active matrix liquid crystal displays ; Thin film transistor technology; Aperture ratio; Black masks; Disclination lines; High luminance

28/3,K/19 (Item 4 from file: 8)   
DIALOG(R)File 8:Ei Compendex(R)   
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02354304 E.I. Monthly No: EIM8711-080539

Title: TOP GATE AMORPHOUS SILICON THIN FILM TRANSISTOR FOR LCD ADDRESSING.

Author: Bonnel, M.; Favennec, J. L.; Laot, A.; Morin, F.; Richard, J.; Richou, F.

Corporate Source: CNET, Lannion, Fr

Conference Title: Extended Abstracts - Fall Meeting (168th Society

Meeting), the Electrochemical Society.

Conference Location: Las Vegas, NV, USA Conference Date: 19851013

E.I. Conference No.: 09038

Source: Electrochemical Society Extended Abstracts v 85-2. Publ by Electrochemical Soc, Pennington, NJ, USA p 631-632

Publication Year: 1985

CODEN: ESABB6 ISSN: 0160-4619

Language: English

**Title: TOP GATE AMORPHOUS SILICON THIN FILM TRANSISTOR FOR LCD ADDRESSING.**

**Abstract:** Liquid crystal displays (LCDs) can be driven by an active matrix of amorphous silicon (a-Si:H) thin...

...with the driving of LCDs. Our TFTs are built so as they are not very light sensitive; no light shield is needed. Moreover, the simplicity of the process leads to a high production yield associated...

28/3,K/20 (Item 5 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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02347687 E.I. Monthly No: EI8712121887

**Title: LARGE LCD PANEL ADDRESSED BY 320 X 320 TFT ARRAY.**

Author: Richard, J.; Bonnel, M.; Vinouze, B.; Favennec, J. L.; Weisse, P.; Bessonnat, Y.; Gerard, G.; Salaun, S.; Le Contellec, M.; Morin, F.

Corporate Source: CNET, Lannion, Fr

Source: Proceedings of the Society for Information Display v 26 n 3 1985, Pap from the 4th Int Disp Res Conf (Eurodisp '84) Vol II, Paris, Fr, Sep 18-20 1984 p 209-212

Publication Year: 1985

CODEN: SIDPAA ISSN: 0036-1496

Language: ENGLISH

**Title: LARGE LCD PANEL ADDRESSED BY 320 X 320 TFT ARRAY.**

**Abstract:** A large LCD panel (80 X 88 mm\*\*2) consisting of 320 X 320 dots, with every dot...

...H TFT, was developed. A new shortened two-step photolithography process was developed. Moreover, neither light shield nor storage capacitance are required, and the panel can display halftone TV pictures. (Author abstract...

Identifiers: HALFTONE TV PICTURES; THREE-TERMINAL DEVICES; LARGE LCD PANEL

28/3,K/21 (Item 6 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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01813187 E.I. Monthly No: EI8510088512 E.I. Yearly No: EI85031799

**Title: TFT-ADDRESSED LIQUID-CRYSTAL COLOR DISPLAY.**

Author: Sugata, Masao; Okubo, Yukitoshi; Osada, Yoshiyuki, Osada; Kasugayama, Yukio

Corporate Source: Canon Inc, Canon Research Cent, Tokyo, Jpn

Source: Proceedings of the Society for Information Display v 25 n 4 1984, Pap from the 3rd Inst Disp Res Conf (Jpn Disp '83) Vol 2, Kobe, Jpn, Oct 3-5 1983 p 281-285

Publication Year: 1984

CODEN: SIDPAA ISSN: 0036-1496

Language: ENGLISH

...Abstract: color display has been built using an amorphous-silicon thin-film transistor. Use of a light shielding layer in the structure makes possible the application of brighter back-illumination, and a color

...

...by digital combination of the primary red, green, and blue colors. The design of the **liquid crystal display** device was established with the assistance of simulation techniques using SPICE 2 which was prepared...

Identifiers: COLOR DISPLAY; AMORPHOUS-SILICON THIN-FILM TRANSISTOR; COLOR FILTER; METALLIC **LIGHT SHIELDING** LAYERS; BACK-ILLUMINATION

28/3,K/22 (Item 7 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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01599899 E.I. Monthly No: EI8412130013 E.I. Yearly No: EI84034337  
**Title: BACKLIGHTING FOR LIQUID CRYSTAL DISPLAY.**  
Author: Kmetz, A. R.; Paola, C.  
Corporate Source: AT&T Bell Lab, Murray Hill, NJ, USA  
Source: Technical Digest - Western Electric Company n 70 Apr 1983 p 13-14  
Publication Year: 1983  
CODEN: WECTAX ISSN: 0497-0411  
Language: ENGLISH

**Title: BACKLIGHTING FOR LIQUID CRYSTAL DISPLAY.**  
Abstract: Most **liquid crystal displays** (LCDs) operate by polarizing ambient **light** to **block** reflection in the areas defined by the display electrodes. In a reflecting mode, the displays...

...is often desirable to provide some means for illuminating the back of the display. The LCD can then be operated in a transmission mode utilizing the backlighting, or a reflecting mode...

28/3,K/23 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abstracts Online  
(c) 2000 UMI. All rts. reserv.

01338689 ORDER NO: AAD94-07530  
**DEVELOPMENT OF THE ELECTROCHROMIC DEVICE OF PRUSSIAN BLUE/TUNGSTEN TRIOXIDE USING A POLYACRYLONITRILE-BASED (GEL) ELECTROLYTE (TUNGSTEN TRIOXIDE)**  
Author: LIU, TE-YANG  
Degree: PH.D.  
Year: 1993  
Corporate Source/Institution: TUFTS UNIVERSITY (0234)  
Source: VOLUME 54/10-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 5141. 82 PAGES

...indicates the possibility of using electrochromic display to give a better view than does an LCD display. To improve the stability and robustness of liquid devices, the Smart Window\$\sp{\rm...}

...a semiconductor layer (CdS) to the electrochromic device, an image can be generated by a **light** source through a **mask** .

28/3,K/24 (Item 1 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02730961 JICST ACCESSION NUMBER: 96A0133627 FILE SEGMENT: JICST-E  
**Light diffusion film for liquid crystal display.**  
ARAKAWA FUMIHIRO (1); MASAKI TADAHIRO (1); SUZUURA YASUKI (2); MATSUZAKI HIROSHI (2)  
(1) Dai Nippon Print. Co., Ltd., Cent. Res. Inst.; (2) Dai Nippon Print. Co., Ltd., Packag. Res. Lab.  
Porima Zairyo Foramu Koen Yoshishu, 1995, VOL.4th, PAGE.79-80, FIG.4  
JOURNAL NUMBER: L2062AAZ  
UNIVERSAL DECIMAL CLASSIFICATION: 681.7 621.385:621.397

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Conference Proceeding  
ARTICLE TYPE: Short Communication  
MEDIA TYPE: Printed Publication

Light diffusion film for liquid crystal display.  
...DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/25 (Item 2 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02673905 JICST ACCESSION NUMBER: 95A1049003 FILE SEGMENT: JICST-E  
Liquid crystal display device.  
KURAUCHI SHOICHI (1); MIYAZAKI DAISUKE (1); HATO HITOSHI (1); MIDORIKAWA  
TERUYUKI (1)  
(1) Toshiba Corp.  
Toshiba Gijutsu Kokaishu, 1995, VOL.13,NO.85, PAGE.1-6, FIG.2  
JOURNAL NUMBER: L0795AAY ISSN NO: 0288-2701  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

Liquid crystal display device. ...  
DESCRIPTORS: liquid crystal display ; ... /

...light shielding ;

28/3,K/26 (Item 3 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02647654 JICST ACCESSION NUMBER: 95A0884229 FILE SEGMENT: JICST-E  
Liquid Crystal Displays. TFD- LCD and High-Luminance Reflective LCD  
Technology.  
MORITA HIROSHI (1)  
(1) Toshiba Corp.  
Toshiba Rebyu(Toshiba Review), 1995, VOL.50,NO.9, PAGE.695-698,647(2),  
FIG.7, TBL.2  
JOURNAL NUMBER: F0360AAK ISSN NO: 0372-0462 CODEN: TORBA  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

Liquid Crystal Displays. TFD- LCD and High-Luminance Reflective LCD  
Technology.  
ABSTRACT: Thin-film diode liquid -crystal displays (TFD-LCDs) are  
attracting considerable attention because they will provide display  
performance close to that of thin-film transistor liquid -crystal  
displays (TFT-LCDs) while requiring a simpler and lower cost  
fabrication process. The TFD array substrate has a light -shielding  
component that consists only of a one-directional fine electrode and  
small TFD elements. It...  
DESCRIPTORS: liquid crystal display ;

28/3,K/27 (Item 4 from file: 94)  
DIALOG(R)File 94:JICST-EPlus

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02628626 JICST ACCESSION NUMBER: 95A0876223 FILE SEGMENT: JICST-E

**Flat surface light source equipment.**

FUJISHIRO HIROYOSHI (1)

(1) Toshiba Corp.

Toshiba Gijutsu Kokaishu, 1995, VOL.13,NO.73, PAGE.193-196, FIG.3

JOURNAL NUMBER: L0795AAY ISSN NO: 0288-2701

UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397 628.91/.95

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

**28/3,K/28 (Item 5 from file: 94)**

DIALOG(R)File 94:JICST-EPlus

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02611634 JICST ACCESSION NUMBER: 95A0926323 FILE SEGMENT: JICST-E

**Liquid crystal display element and its manufacturing technique.**

TANAKA YASU HARU (1); WAKAI CHIZUKO (1); OKOSHI NORIKO (1); SAITO YUKIHITO (1)

(1) Toshiba Corp.

Toshiba Gijutsu Kokaishu, 1995, VOL.13,NO.77, PAGE.23-29, FIG.5

JOURNAL NUMBER: L0795AAY ISSN NO: 0288-2701

UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

Liquid crystal display element and its manufacturing technique. ...

DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

**28/3,K/29 (Item 6 from file: 94)**

DIALOG(R)File 94:JICST-EPlus

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02608789 JICST ACCESSION NUMBER: 95A0805754 FILE SEGMENT: JICST-E

**The Process for the Formation of the Color Filter for the Liquid Crystal Display on the Application of a Colored Photosensitive Transfer Material.**

SHINOZAKI FUMIAKI (1); IWASAKI MASAYUKI (1); SATO MORIMASA (1)

(1) Fuji Photo Film Co., Ltd.

Nippon Insatsu Gakkaishi(Bulletin of the Japanese Society of Printing Science and Technology), 1995, VOL.32,NO.3, PAGE.158-165, FIG.14, TBL.4, REF.8

JOURNAL NUMBER: G0233ABD ISSN NO: 0914-3319

UNIVERSAL DECIMAL CLASSIFICATION: 681.327.2

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

**The Process for the Formation of the Color Filter for the Liquid Crystal Display on the Application of a Colored Photosensitive Transfer Material.**

...ABSTRACT: support, and so on. In addition, a self-alignment process for

the formation of a light shielding pattern, i.e. black matrix, was also discussed. These processes can simplify the formation of the high quality color filter for the liquid crystal display . (author abst.)

...DESCRIPTORS: liquid crystal display ;

28/3,K/30 (Item 7 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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02584196 JICST ACCESSION NUMBER: 95A0702780 FILE SEGMENT: JICST-E  
Recent Developments in Display Technology. Structural Variety. Liquid  
Crystal Displays(LCDs). Color STN Liquid Crystal Display.  
WATANABE HIROMU (1)

(1) Sharp Corp.

Denshi Joho Tsushin Gakkaishi(Journal of the Institute of Electronics,  
Information and Communication Engineers), 1995, VOL.78,NO.7,  
PAGE.668-671, FIG.5, TBL.2

JOURNAL NUMBER: F0019ADO ISSN NO: 0913-5693

UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

Recent Developments in Display Technology. Structural Variety. Liquid  
Crystal Displays(LCDs). Color STN Liquid Crystal Display.

DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/31 (Item 8 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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02582198 JICST ACCESSION NUMBER: 95A0631862 FILE SEGMENT: JICST-E  
Liquid crystal display equipment.

YAMADA YUMIKO (1)

(1) Toshiba Corp.

Toshiba Gijutsu Kokaishu, 1995, VOL.13,NO.45, PAGE.147-155, FIG.4

JOURNAL NUMBER: L0795AAY ISSN NO: 0288-2701

UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

Liquid crystal display equipment.

ABSTRACT: The aperture rate of liquid crystal display equipment of TN  
type has been improved, and its brightness has been increased. However,  
a...

DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/32 (Item 9 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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02557811 JICST ACCESSION NUMBER: 95A0778183 FILE SEGMENT: JICST-E  
Liquid crystal display.

YOSHIMURA HIROYUKI (1)

(1) Toshiba Corp.

Toshiba Gijutsu Kokaishu, 1995, VOL.13,NO.62, PAGE.101-102, FIG.1  
JOURNAL NUMBER: L0795AAY ISSN NO: 0288-2701  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

Liquid crystal display.  
DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/33 (Item 10 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02557284 JICST ACCESSION NUMBER: 95A0758778 FILE SEGMENT: JICST-E  
Liquid crystal displays.  
DAITO HIROTSUGU (1)

(1) Toshiba Corp.  
Toshiba Gijutsu Kokaishu, 1995, VOL.13,NO.59, PAGE.121-124, FIG.3  
JOURNAL NUMBER: L0795AAY ISSN NO: 0288-2701  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

Liquid crystal displays.  
DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/34 (Item 11 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02557264 JICST ACCESSION NUMBER: 95A0758758 FILE SEGMENT: JICST-E  
Color filter substrate.

FUJIBAYASHI SADAYASU (1); NONAKA MASANOBU (1)  
(1) Toshiba Corp.  
Toshiba Gijutsu Kokaishu, 1995, VOL.13,NO.59, PAGE.27-29, FIG.1, TBL.1  
JOURNAL NUMBER: L0795AAY ISSN NO: 0288-2701  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397 681.7  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/35 (Item 12 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02537809 JICST ACCESSION NUMBER: 95A0599383 FILE SEGMENT: JICST-E  
Active matrix type liquid crystal display.  
KITAZAWA RINKO (1); HANAZAWA YASUYUKI (1); SHIMANO TAKUYA (1); INADA  
KATSUHIKO (1); IIZUKA TETSUYA (1)  
(1) Toshiba Corp.

Toshiba Gijutsu Kokaishu, 1995, VOL.13,NO.43, PAGE.87-98, FIG.5  
JOURNAL NUMBER: L0795AAY ISSN NO: 0288-2701  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

Active matrix type liquid crystal display.  
DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/36 (Item 13 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02337740 JICST ACCESSION NUMBER: 95A0284801 FILE SEGMENT: JICST-E  
**A thin film graphite-based black matrix for LCD color filter.**  
CHIYODA HIRONOBU (1); TSUBOI MASAAKI (2)  
(1) Hitachi Powdered Met. Co., Ltd.; (2) Toyoshigyo  
Denshi Joho Tsushin Gakkai Gijutsu Kenkyu Hokoku(IEIC Technical Report  
(Institute of Electronics, Information and Communication Engineers),  
1995, VOL.94,NO.508(SDM94 192-204), PAGE.19-24, FIG.4, TBL.1  
JOURNAL NUMBER: S0532BBG  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Original paper  
MEDIA TYPE: Printed Publication

**A thin film graphite-based black matrix for LCD color filter.**  
DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/37 (Item 14 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02298536 JICST ACCESSION NUMBER: 95A0021329 FILE SEGMENT: JICST-E  
**1995's latest liquid crystal process technology. Oriented film technology.  
Spacer. WH/WF/WP/MH/ME/MP/BH/BF/BP.Tokuyama Co., Ltd.**  
Gekkan Semiconductor World(Semiconductor World), 1994, VOL.13,NO.13,  
PAGE.316, TBL.2  
JOURNAL NUMBER: Y0509AAA ISSN NO: 0286-5025  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Introduction article  
MEDIA TYPE: Printed Publication

...ABSTRACT: and white. Especially, the black is excellent in shading  
power, and is optimum for color LCD .The particle size precision is  
+-.0.05.MU.m, and the particle size pitch is...  
DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/38 (Item 15 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02298535 JICST ACCESSION NUMBER: 95A0021328 FILE SEGMENT: JICST-E  
1995's latest liquid crystal process technology. Oriented film technology.  
Spacer. Micro pearl SP/BB/CB/AU/NI.Sekisui Fine Chemical Co., Ltd.  
Gekkan Semiconductor World(Semiconductor World), 1994, VOL.13,NO.13,  
PAGE.315, FIG.1  
JOURNAL NUMBER: Y0509AAA ISSN NO: 0286-5025  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Introduction article  
MEDIA TYPE: Printed Publication

DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/39 (Item 16 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
(c)2000 Japan Science and Tech Corp(JST). All rts. reserv.

02269961 JICST ACCESSION NUMBER: 94A0959904 FILE SEGMENT: JICST-E  
Special issue : Particle deposition. Measurement technique of surface  
particulate contamination of large glass substrates for liquid crystal.  
ORAI IZUO (1); KUMAZAWA YUTAKA (1)  
(1) Hitachi Electron. Engineering Co., Ltd.  
Kurin Tekunoroji(Clean Technology), 1994, VOL.4,NO.11, PAGE.45-50, FIG.16,  
TBL.1, REF.9  
JOURNAL NUMBER: L1138AAI ISSN NO: 0917-1819 CODEN: KTEKE  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

...ABSTRACT: such as black spots, pinholes, projections etc. Application  
examples of the inspection equipment in an LCD manufacturing process  
are shown and the evaluation results are reported.

DESCRIPTORS: liquid crystal display ; ...

...light shielding ;

28/3,K/40 (Item 17 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02078146 JICST ACCESSION NUMBER: 94A0646406 FILE SEGMENT: JICST-E  
New black matrix for the color filter of liquid crystal display.  
YAMANE HIROSHI (1); KOTERA SHIGEO (1); IWASHITA AKIRA (1); TSUBOI MASAYOSHI  
(1); TACHIZONO SHIN'ICHI (2); YAMAGISHI TAKESHI (2); CHIYODA HIRONOBU  
(2)  
(1) Toyoshigyo; (2) Hitachi Powdered Met. Co., Ltd.  
Nippon Insatsu Gakkai Kenkyu Happyokai Koen Yokoshu(Preprint. Conference  
(of) Japanese Society of Printing Science and Technology), 1994,  
VOL.92nd, PAGE.77-79, FIG.4  
JOURNAL NUMBER: L0944AAQ  
UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397 667.633/.638  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Conference Proceeding  
ARTICLE TYPE: Short Communication  
MEDIA TYPE: Printed Publication

New black matrix for the color filter of liquid crystal display.  
...DESCRIPTORS: liquid crystal display ; ...

...light shielding

28/3,K/41 (Item 18 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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02032816 JICST ACCESSION NUMBER: 94A0458761 FILE SEGMENT: JICST-E

**A High-Aperture-Ratio a-Si TFT Liquid Crystal Light Valve for Workstations.**

HIRAI Y (1); TAKAHASHI N (1); NAKASHIMA K (1); SUKEGAWA O (1); KANEKO S (1)

(1) NEC Corp.

NEC Res Dev, 1994, VOL.35,NO.2, PAGE.165-171, FIG.10, TBL.1, REF.10

JOURNAL NUMBER: G0138AAA ISSN NO: 0547-051X CODEN: NECRA

UNIVERSAL DECIMAL CLASSIFICATION: 621.385:621.397 681.327.2

LANGUAGE: English COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

...ABSTRACT: Liquid Crystal Light Valves (LCLVs). A novel pixel structure has been proposed, which has a **light shield** element under a pixel and busline electrode of LCLVs. A liquid crystal disclination, which causes image deterioration, was closely examined, and was hidden by an optimally shaped **light shield** to achieve a high quality image. By using this structure, aperture-ratio as large as...

DESCRIPTORS: **liquid crystal display** ; ...

...light shielding ;

28/3,K/42 (Item 19 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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00790647 JICST ACCESSION NUMBER: 89A0596559 FILE SEGMENT: JICST-E

**Characteristics of very high contrast(VHC) liquid crystal display for automotive application.**

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(1) Asahigarasu Denshishohinkaise

Asahi Garasu Kenkyu Hokoku(Reports of the Research Laboratory, Asahi Glass Co., Ltd), 1989, VOL.39,NO.1, PAGE.89-98, FIG.12, REF.3

JOURNAL NUMBER: F0002AAX ISSN NO: 0004-4210 CODEN: AGKHA

UNIVERSAL DECIMAL CLASSIFICATION: 629.33.04/.06

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

**Characteristics of very high contrast(VHC) liquid crystal display for automotive application.**

ABSTRACT: **Liquid crystal display** has been widely applied to automotive instruments. The negative mode twisted nematic cell has been ...

...bleed-though, reduces legibility of the display. To solve this problem, a very high contrast **liquid crystal display** (VHC) was developed. The VHC is based on 3 technologies. (1) **Light shielding black mask** printed inside the cell. (2) The positive mode twisted nematic configuration. (3) An inversed driving...

...DESCRIPTORS: **liquid crystal display** ;

28/3,K/43 (Item 20 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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